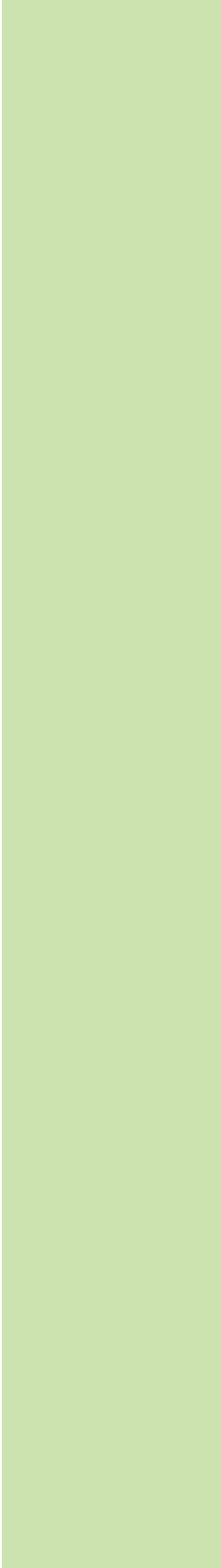


CULTIVATE L.A.

AN ASSESSMENT OF URBAN AGRICULTURE
IN LOS ANGELES COUNTY • JUNE 2013

A comprehensive project
submitted in partial satisfaction
of the requirements for the degree
Master of Urban and Regional Planning

Prepared for the University of California
Cooperative Extension - Los Angeles



Disclaimer: Neither the University of California nor the School of Public Affairs either supports or disavows the findings in any project, report, paper, or research listed herein. University affiliations are for identification only; the University is not involved in or responsible for the project.

RESEARCHERS

Jaemi Jackson, Project Manager

Kelly Rytel, Project Manager

India Brookover

Nicholas Efron

Genevieve Hernandez

Erik Johnson

Youngjun Kim

Wenchong Lai

Mayra Navarro

Alba Pena

Zachary Rehm

Hyejeong Yoo

Zachary Zabel

RESEARCH ASSOCIATES

Laurel Hunt

Jessica Howen McBride

Matthew Rising

INSTRUCTORS/FACULTY ADVISORS

Carol Goldstein

Stephanie Pincetl

TEACHING ASSISTANT

Adam Dorr

Cover photograph
by Zachary Zabel,
The Cityfarm,
Los Angeles, CA

Thank you!

Many minds came together to envision the research project presented in this report and many hands worked together to realize the vision of capturing the state of urban agriculture in Los Angeles County. We therefore wish to extend our gratitude to all those whose support helped make this report possible.

We would foremost like to thank our project client, Dr. Rachel Surls, the Sustainable Food Systems Advisor at the University of California Cooperative Extension – Los Angeles County, for giving us the opportunity to investigate a topic as timely and as important as urban agriculture in Los Angeles County. Her dedication to urban agriculture and the food systems of Los Angeles County set an example which we were determined to follow.

We would like to thank our instructors and faculty advisors Stephanie Pincetl and Carol Goldstein, as well as doctoral student teaching assistant Adam Dorr, who guided us through our research and analysis. Their critical and constructive input was both encouraging and invaluable and this report would not have been possible without their guidance.






We wish to thank all of our guest lecturers who volunteered to share their expertise with our team: Alex Weiser of Weiser Family Farms; Martin Annenberg of Fresh Point; Tara Herrera of Herrera Horticultural Consulting;

Loraine Weller of the University of California, Irvine; Glen Dake, Landscape Architect; and Alexa Delwiche and Clare Fox of the Los Angeles Food Policy Council. Our perspectives and our research benefited from their remarkable contributions of time, information, and moral support, and we sincerely appreciate their generosity.

We also wish to express our appreciation to David Weinstein and Rick Lejeune of Heath & Lejeune, as well as Lisa Brenneis of Churchill Orchard, for inviting our research team on a tour and analysis of a certified organic produce distribution facility and for sharing their experiences and visions for urban agriculture in Southern California.

Over the six-month duration of this project we interacted with more than 1,500 business owners, entrepreneurs, farmers, farmers market managers, grocers, distributors, professors, restaurateurs, school teachers and staff, volunteers, and UCLA professors, each of whom provided valuable information without which this research would not have been possible. We wish to extend our sincere thanks and appreciation to all of these individuals—whose daily efforts sustain urban agriculture in Los Angeles County—for their cooperation and support.

Lastly, we would like to thank the UCLA Luskin School of Public Affairs, the Department of Urban Planning, and all of our faculty members and administrative staff for their ongoing support.

Introduction	I
Regulating Land Use for Urban Agriculture: Much Ado About Chickens	
Jaemi Jackson Zachary Rehm	 08
Mapping Urban Agriculture: A Spatial Snapshot	
India Brookover Erik Johnson Youngjun Kim Wenchong Lai	Mayra Navarro Alba Pena Hyejeong Yoo  31
School Gardens: Learning and Growing	
Genevieve Hernandez	 58
Economics and Geography of the Altadena Farmers' Market: Hotspot or Not?	
Kelly Rytel	 73
Distribution Strategies for Urban Farmers	
Nicholas Efron Zachary Zabel	 103
Conclusion: How's it Growing, L.A.?	124
Glossary of Terms	130
Bibliography	133
Appendices	138

INTRODUCTION

How has urban agriculture changed over time and what are planners' roles in addressing urban food sources?

ROSES
1/2 dozen
\$5.00

ROSES
\$10

This research about urban agriculture in Los Angeles County adds depth and breadth to the ongoing, complex conversation of food and the city. Created over many months of research, this dedicated team of graduate students contacted over 1,500 entities in the pursuit of creating a baseline of urban agriculture that spans from understanding the greater regional environment to the strategies of individual farmers.

This report assesses the state of urban agriculture in Los Angeles County today. The County of Los Angeles is the most populous in the United States, containing the second most populous city in the United States. California is the most productive agricultural state in the country, but there is little research on agricultural practices in Los Angeles. The most visible forms of urban agriculture—farmers markets and community gardens—do not tell the whole story. The research presented in this report provides an understanding of the nuances of urban agriculture in Los Angeles that have not previously been documented. Much of the existing discussion, promotion, and advocacy of urban agriculture focuses on the qualitative benefits, characteristics, and ambitions of the movement. Our researchers aimed to complement this discourse by providing an empirical analysis of major sectors of urban agriculture in Los Angeles County, specifically its locations and aggregations.

As the capstone requirement at UCLA's Luskin School of Public Affairs, Department of Urban Planning, this report represents the culmination of six months of collaborative research between thirteen Master of Urban and Regional Planning students and three research associates, with facilitation by a doctoral candidate student advisor, and two faculty advisors.

The client, University of California Cooperative Extension in Los Angeles County (UC-CE-LA), is part of the University of California's Division of Agriculture and Natural Resources (UC ANR). Since its establishment by federal legislation in 1914, Cooperative Extension has served as the local arm of land grant universities in each state, providing research-based information at the community level. Historically, Cooperative Extension has been focused on helping farmers adjust to changing conditions and adopt new technologies. Additionally, Cooperative Extension works on health,

Cover photograph by
Jaemi Jackson,
Calabasas Farmers
Market, Calabasas, CA

nutrition, natural resource, and youth issues. Cooperative Extension offices nationwide are supported by partnerships between the U.S. Department of Agriculture, land grant universities, and local county governments. The Los Angeles County office of UC Cooperative Extension offers a wide variety of programs, including urban gardening, agriculture, nutrition education, natural resources management, and 4-H youth development.

UCCE-LA's work with farmers is currently focused primarily on the county's remaining commercial-scale agriculture in the high desert, near Lancaster and Palmdale. Additionally, UCCE actively engages with community, school, and backyard gardeners through its Master Gardener Volunteer Program. However, the urban agriculture movement is rousing interest in small-scale agricultural production in the county, spurring UCCE to ask how it can most appropriately respond to an emerging clientele group. A new position, Sustainable Food Systems Advisor for UCCE-LA, was recently established in part to help address this audience.

Dr. Rachel Surls, the UCCE Sustainable Food Systems Advisor, worked closely with the students and UCLA faculty on this project.

She has existing partnerships with researchers at UC Davis, University of Wisconsin, Kansas State University, and other institutions studying urban agriculture, and is a member of the Los Angeles Food Policy Council and its urban agriculture working group. UCCE-LA staff have worked closely with researchers at the Riverside, Berkeley, and Davis campuses—all of which have agriculture and natural resources programs—yet rarely with researchers at UCLA despite the close proximity. This project presented an opportunity to forge a partnership between UCCE-LA/UC ANR and UCLA which may help to guide the urban agriculture movement locally, as well as statewide.

HISTORY OF URBAN AGRICULTURE

Communities have organized urban spaces for agriculture in American cities since the 1890s. First implemented by social reformers eager to provide land and skills training to unemployed laborers in industrial cities on the east coast, urban agriculture in the United States has served as a mechanism for education, empowerment, and community building from its genesis (Lawson, 2005). From early on, school gardens have been used in cities as an



East Seventh Street School, circa 1913

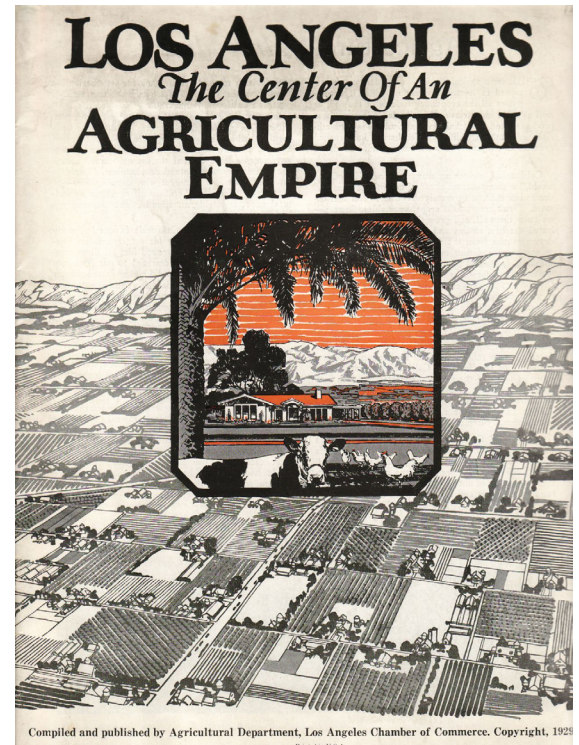
Source: Mary Richards Gray from The Education of Children in the School Gardens of Los Angeles

interactive teaching tool to convey civic involvement and instill good work habits, while community gardens have served as outlets for therapy and expression in marginalized and immigrant communities (Gray, 1913). With the onset of the Great Depression in the 1930s, farming in American cities increased. Subsistence garden plots and cooperative urban farms were established to aid the millions of unemployed urbanites. In 1934, more than 23 million households participated in municipal and state government-funded subsistence gardening programs (Lawson, 2005).

The early 20th Century also saw the involvement of the federal government in urban agriculture activities. In response to food shortages during World Wars I and II, millions of Americans tended backyard and community gardens as a way to augment the domestic food supply (Hodgson et al., 2011; Lawson, 2005). Known as Victory Gardens, or “food gardens for defense,” the campaign was seen as an effective method of boosting public morale, while allowing more food to be sent to troops overseas. Victory and Depression gardens, with heavy investment and involvement from the state, remain the largest-scale urban agriculture initiatives in the United States to date. (Hodgson et al., 2011; Lawson, 2005).

The economic boom in the United States following World War II accelerated suburbanization, which displaced agricultural activities away from cities. As developers covered farmland with tract housing and cul-de-sacs, agriculture was struck from many cities’ zoning codes as a recognized land use (Butler, 2012). As interest in urban agriculture dwindled in the post-war years, a scattering of school and community gardens remained active, serving as the inspiration for a future resurgence. In the mid-1970s, emerging environmental ethics coupled with rising food prices and an energy crisis, led to renewed interest in urban farming (Lawson, 2005).

In recent years the popularity of urban agriculture has risen steadily in North America. Increasing interest in the local food movement, healthy eating, and sustainable cities has sparked a growth of farming in urban

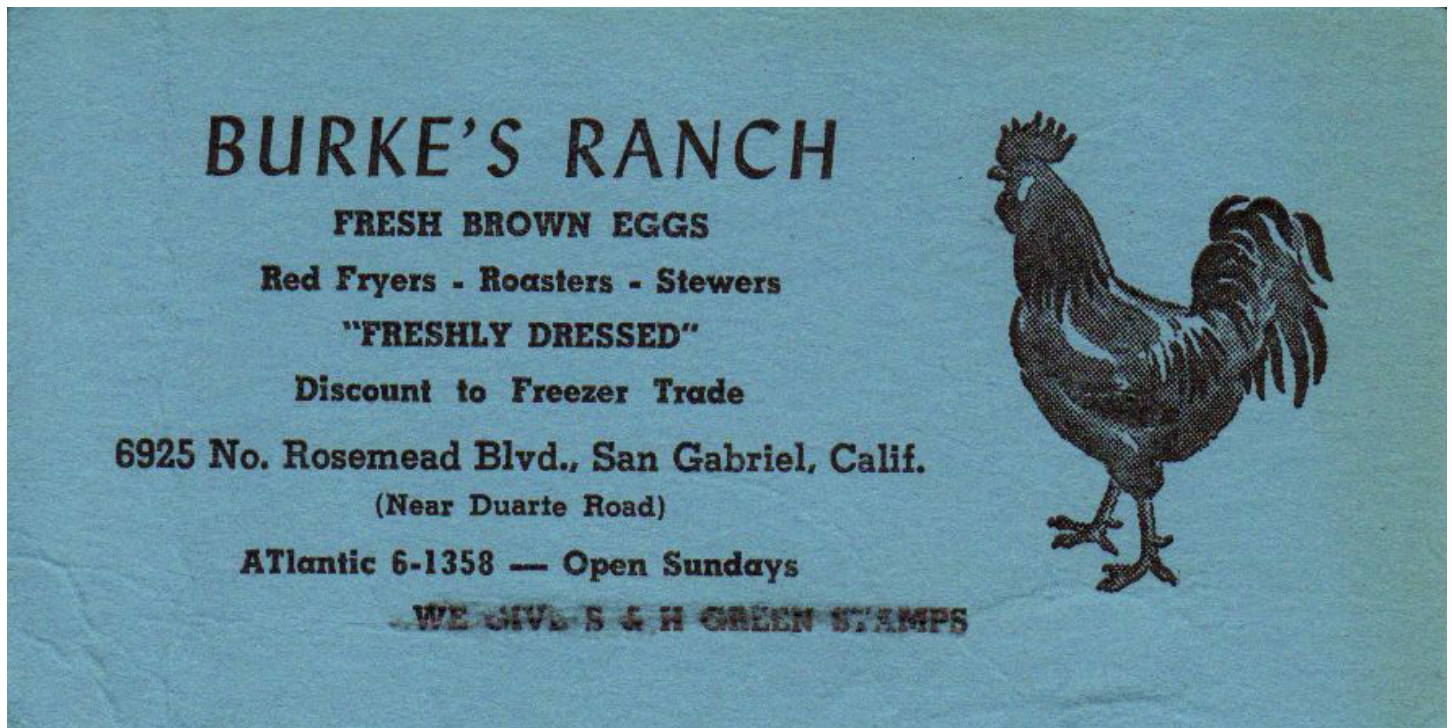


Cover of a 1929 promotional magazine for agricultural products, LA Chamber of Commerce.
Source: Private Collection

environments. While for-profit urban growers are increasing and American cities experience a boom in farmers markets, community gardens remain the most prevalent form of urban agriculture (Hodgson et al., 2011). Although the contribution of urban agriculture to the overall food system is marginal, the significant loss of population in older, industrial cities such as Cleveland, Detroit, and Buffalo has left behind an abundance of vacant land capable of serving as a testing ground for large scale urban food production and job creation in postindustrial America (Hodgson et al., 2011).

URBAN AGRICULTURE AS A PLANNING ISSUE

In the past, professional planners seeking to regulate land use and improve public health have actively defined farming as a rural activity. With the increase in interest of urban farming over the last few decades in the United States, planners face a unique challenge in redefining the role of agriculture within cities (Hodgson et al., 2011). In 2011, the American



*This poultry ranch was redeveloped as a two-story apartment building in the early 1960s
Source: Private Collection*

Planning Association published the book *Urban Agriculture: Growing Healthy, Sustainable Places*, which provides this definition of urban agriculture:

"Urban agriculture entails the production of food for personal consumption, education, donation, or sale and includes associated physical and organizational infrastructure, policies, and programs within urban, suburban, and rural built environments. From community and school gardens to rooftop gardens and bee-keeping operations in built-out cities, urban agriculture exists in multiple forms and for multiple purposes" (Hodgson et al., 2011).

Because urban agriculture entails the use of urban land, urban agriculture also has implications for urban land-use planning, which is controlled and regulated by municipal governments and planning agencies. In addition to fostering more cohesive communities, planners are beginning to see urban agriculture as an effective way to redevelop brownfield sites, as well as being a more productive use of traditional lawns and green space (Hodgson et al., 2011). While urban planners are catching

up in recognizing urban agriculture as a viable form of community economic development and resilience, a variety of actors have been responsible for its renaissance. Non-profits, farmers market managers, and advocates have all been responsible for incrementally shaping planning and public policy in favor of the urban agriculture movement.

An investigative study of urban agriculture in Los Angeles through an urban planning lens has not been done before. Some of our methods are unique, while others have been adapted from similar studies in other cities around the country. During the mid-1990s, researchers began to take notice of the community- and personal-development aspects of urban agriculture, which spawned further studies on the topic. Subsequently, studies have documented many of the benefits of urban agriculture, ranging from inner city food access to environmental conservation, to challenges like contaminated soil in urban areas and public perception (Reynolds, 2011).

Urban Agriculture (UA) is an activity that produces, processes, distributes, or sells a diversity of food and non-food products, on land and water in urban and peri-urban areas, using or reusing natural resources and urban wastes, to yield a diversity of crops and livestock.

To help focus the project, our researchers created and used the following definition of urban agriculture:

"Urban Agriculture (UA) is an activity that produces, processes, distributes, or sells a diversity of food and non-food products, on land and water in urban and peri-urban areas, using or reusing natural resources and urban wastes, to yield a diversity of crops and livestock."

- (Adapted from the United Nations Development Programme, 1996 by the researchers on February 19, 2013).

This succinct yet inclusive description was selected in lieu of the APA's definition of urban agriculture:

"Urban and peri-urban agriculture (UPA) refers to the production, distribution and marketing of food and other products within the cores of metropolitan areas (comprising community and school gardens; backyard and rooftop horticulture; and innovative food-production methods that maximize production in a small area), and at their edges (including farms supplying urban farmers markets, community supported agriculture, and family farms located in green belts). Looked at broadly, UPA is a complex activity, addressing issues central to community

food security, neighborhood development, environmental sustainability, land use planning, agricultural and food systems, farmland preservation, and other concerns" (APA, 2013).

Our researchers felt that this definition, which focuses on "the core" of metropolitan areas was inappropriate for assessing a poly-centric urban area like Los Angeles County. Additionally, concern was raised with the inclusion of production on the urban fringe, which in Los Angeles County includes large-scale industrialized agriculture.

CHAPTER SUMMARIES

1. Regulating Land Use for Urban Agriculture: Much Ado About Chickens

This study begins with an investigation of current governmental regulations dictating the environment for urban agriculture in Los Angeles County. Our researchers reviewed the zoning codes and municipal regulations for all 88 incorporated cities in Los Angeles County as well as its unincorporated areas to determine what is, and is not allowed, in regard to urban agriculture in the region.



*Vintage interior transit poster. Women's Auxiliary, LA Chamber of Commerce.
Source: Private Collection*

2. Mapping Urban Agriculture: A Spatial Snapshot

Understanding the full extent of urban agriculture in Los Angeles County is critical for planners, policymakers, industry stakeholders, and urban farmers who wish to support agricultural activities in local communities. Agricultural activities are occurring in numerous locations across the region, but there is currently no comprehensive database of agriculture sites in urban Los Angeles County. This chapter offers a map the full extent of urban agriculture in the county, focusing on three typologies: school gardens, community gardens, and commercial primary growing sites. Researchers compiled lists from a variety of sources, conducted phone calls for verification, and used Google Earth to visually document existing agriculture in the urbanized region. The final product features an extensive database detailing over 1,300 sites in the county.

3. School Gardens: Learning and Growing

School gardens have existed in Los Angeles and throughout the nation for more than 100 years. Today there are over 700 school gardens in Los Angeles County. This chapter discusses the historical context of school gardens and examines various school garden programs in Los Angeles County, identifying factors which present challenges and opportunities for success. Researchers conclude with a comprehensive set of recommendations for encouraging and sustaining school gardens.

4. The Economics and Geography of the Altadena Farmers' Market: Hotspot or Not?

Interest in urban agriculture is increasingly associated with the promotion of an alternative food production system that values the quality of the food that we eat—including how the food was grown or produced and shortening the time from picking to selling.



*Santa Monica Community Garden
Photograph by Zachary Zabel*

Farmers Markets found in urban areas are a key alternative to a food distribution system that provides a sales venue for these quality foods while also offering the shopper a pleasant community-based experience. By focusing on the urban growers and producers of artisanal goods selling products at the Altadena Farmers Market, our researchers examine how small urban growers fit into the greater Los Angeles economy, while providing critical suggestions for policy makers.

5. Distribution Strategies for Urban Farmers in Los Angeles County

This research sought to uncover nuances in the relationship between distribution and urban agriculture. Urban agriculture is an industry, and just like any industry its economic success relies heavily on goods movement. Researchers conducted interviews with for-profit urban growers in Los Angeles County, as well as third-party distributors, grocers, and local restaurants. This chapter presents a comprehensive account of distribution methods utilized by urban farmers and agriculture producers in Los Angeles County.



REGULATING LAND USE FOR URBAN AGRICULTURE

Much Ado About Chickens

How do cities in
L.A. County regulate
flora and fauna?

Zoning codes and municipal regulations dictate the legal use of the built environment, which includes urban agriculture. Within Los Angeles County, regulations regarding urban agriculture differ between cities and, in many cases, are non-existent. This chapter assesses the regulatory landscape of urban agriculture in all 88 cities in Los Angeles County as well as its unincorporated areas.

INTRODUCTION

Previous researchers, policymakers, and activists have identified best practices and policies for regulating residential, commercial, agricultural, and additional land uses throughout Los Angeles County (and elsewhere in the United States and the world). However, no comprehensive research has been previously conducted on existing land use regulations and zoning codes in Los Angeles County. The county contains 88 incorporated cities, interspersed with unincorporated areas. Given that municipal codes regulate the same activities differently between cities and zoning codes regulate the same activities differently within a given city, it is not possible to make broad generalizations about the agricultural regulations of the county as a whole.

The research focused on understanding the regulations of all cities within Los Angeles County. This posed several challenges. While county-wide ordinances are rare, the Los Angeles region is exceptional in the number of cities and urban spaces that blend together, so that one may travel from Venice to Hollywood (both within the City of Los Angeles) but pass through the cities of Santa Monica, Beverly Hills, and West Hollywood. The cities create a fluid, seamless urban form, but their regulations do not. Understanding the differences between these regulations is crucial for anyone wishing to further the development of urban agriculture.

The research originated with one simple question, “What is the current regulatory landscape for urban agriculture in Los Angeles County?” Researchers reviewed the municipal and zoning codes of every city in the county, identified every regulation and ordinance related to agricultural activities, and sought to

Cover photograph
by Zachary Zabel,
The Cityfarm,
Los Angeles, CA

What is the current regulatory landscape for urban agriculture in Los Angeles County?

This grassroots movement of raising food, flora, and fauna, however, rarely operates in full consciousness of the rules and regulations set forth by government.

present the information in an easily-digestible format. Initial findings noted that the landscape of agricultural regulation is rocky, confusing, and often illogical. Los Angeles County residents—from backyard gardeners to urban agricultural entrepreneurs—have few resources to help them navigate the vast and confusing regulatory landscape. Researchers identified patterns within cities’ regulations, which helped to formulate policy recommendations and areas for future research.

RESEARCH

The goal of this research was to answer the question: “What is the current regulatory landscape for urban agriculture in Los Angeles County?” Based on the available data, researchers found interesting patterns within the regulatory environment, which helped formulate policy recommendations and areas of future research.

LITERATURE REVIEW

The story of human civilization is a story of regulation: who can do what activity? Where and when may an activity be performed? What are the consequences for violators? Throughout history, social norms have been regulated by religion, government, and other institutions. Today, cities within Los Angeles County and the United States have both informal and formal regulations. There are social pressures and trends that influence behavior, while at the same time codes and laws determine in which activities the government will allow people to engage.

While agriculture and urban centers have evolved in tandem over the course of human history, they have also been seen as spatially incongruous, particularly toward the close of the 19th Century (Butler, 2012). This is perhaps why the contemporary movement around urban agriculture is so appealing. Urban agri-

culture is by no means unique to this generation, but its 21st Century iteration appeals to the current values of sustainability, localization, and self-sufficiency. Many also cite the economic crisis, environmental concern, and rising food and fuel prices as external drivers of the trend (Mees & Stone, 2012; Reynolds, 2011).

This grassroots movement of raising food, flora, and fauna, however, rarely operates in full consciousness of the rules and regulations set forth by government (Gaynor, 1999). Much of the practitioner/advocate conversation revolves around notions of self-provisioning and personal connection to food and nature. In *The Urban Homestead*, Coyne and Knutzen (2008) devote three hundred pages to instructing the reader how to raise animals, plant crops, and build backyard farm equipment, and only one sentence recommends checking a municipal code to confirm that these activities would be legal.

The idea of raising one’s own food is so attractive that businesses have formed to create and cultivate urban “farms” on customers’ property. Companies such as Los Angeles Farmscape use the terms “urban farmer,” “mini-farm,” and “urban farm” to describe the food production that they facilitate in their clients’ backyards (Huffstutter, 2010). However, most of the value is placed on the horticultural knowledge that the practitioners bring to the table, rather than legal knowledge of health, zoning, or building codes which may apply to the new gardens.

The Ecology Center tells a story of a Berkeley gardener who tried to start up a small community supported agriculture site on her property, but was stymied by “a few bland paragraphs of a zoning code” (Milner, 2010). The situation largely revolved around the exchange of money, making the small farming endeavor a “high-impact home occupation” of “food production.” The resident saw her edible garden as a positive way to feed herself and her neighbors, not a way to make a buck by gaming the zoning system. Nevertheless, she was obligated to forego her “backyard farm” in order to follow the city’s laws. In Michigan,

Many cities have health and zoning codes that make certain kinds of agriculture difficult or impossible to conduct legally.

Urban farmers often find themselves in violation of municipal codes that they never knew to examine.

a woman was sentenced to 93 days in jail for failure to remove her front yard garden (Hoffer, 2010). A Los Angeles couple is on a mission to legalize beekeeping within the residential zones and even founded a non-profit, Honey Love, to aid their cause (Hoeffle, 2012).

Urban residents choose to raise their own food for a variety of reasons, but the discourse is fundamentally positive, creative, thrifty, and eco-friendly. It is generally not a conversation of rebellion, though the common term “guerilla gardening” references informal warfare tactics to describe horticultural activities that are consciously illegal (Crane et al 2013). Indeed, many cities have health and zoning codes that make certain kinds of agriculture difficult or impossible to conduct legally (Reynolds, 2011; Stringer, 2010). Thus, urban farmers often find themselves in violation of municipal codes that they never knew to examine (Smit et al, 2001; Mukherji & Morales, 2010). Most municipi-

pal codes can be found easily online, but are not accessible for web-illiterate residents or people who do not speak fluent English. Even residents who are proficient in the workings of the Internet and the English language may be stymied when they encounter codes which are formal and full of legal jargon. Zoning and municipal codes do not contain the warm, guiding tones found in resources such as *The Urban Homestead* (Coyne & Knutzen, 2008), *The Backyard Homestead* (Madigan, 2009), and *urbanfarming.org* (2013).

Governments, however, have begun to enter the conversation on urban agriculture. After the roar of wartime Victory Gardens subsided, government agencies dramatically decreased their roles in small-scale urban agriculture, relegating it to a niche activity (Mukherji & Morales, 2010). However, the past few decades have provided increased engagement from the public sector in the reform of



*This Santa Monica Community Garden is an example of the disconnect between zoning codes and actual use. The parcel is zoned as a “Designated Park,” however, the zoning code does not explicitly list community gardens as a permitted use.
Photograph by Zachary Zabel, Santa Monica Community Garden, Santa Monica, CA*

Flora vs. Fauna

Fauna - animal life

Flora - plant life

regulations and zoning, as well as a renewed commitment to programs and funding (Erikson et al, 2009; Mees & Stone, 2012; Wooten & Ackerman, 2011; Butler, 2012).

Motivations for government initiatives are slightly different than those of the practitioner. Government often justifies urban agriculture with goals of improved health indicators, decreased greenhouse gas emissions, and employment opportunities (Ver Ploeg et al, 2009). However, not all agencies are on the same page. For example, the Center for Disease Control addresses urban “food deserts” by focusing on increasing opportunities for retail consumption, rather than opportunities for raising food within the community (USCDC, 2013), whereas the USDA provides funding to urban agriculture projects to improve community welfare (Ver Ploeg et al, 2009). Some states, including Washington, have passed regulations standardizing agricultural restrictions (Erikson et al, 2009), but in most states codes differ from city to city, which creates confusion for urban farmers and gardeners (Madigan, 2009).

It is within cities’ rights to exercise police power in order to minimize conflict and nuisance. This applies no less to practices of urban agriculture, most often in relationship to animals within the city (Butler, 2012; Voigt, 2011). However, the mid-century notion that agriculture and urban life should be separate has changed more quickly than the municipal codes that underpin it (Mukherji & Morales, 2010). The Euclidian and traditional neighborhood design zoning practices have not evolved at the same rate as the cultural practices of the people they should serve. Because of the potential community benefits of urban agriculture, planners should have a great interest in promoting it not only through amenable municipal and zoning codes, but throughout city and regional planning documents (Hodgson et al, 2011).

Some cities are pioneering efforts to change codes and zones, as well as implement programs to support agricultural efforts within their borders. Seattle’s P-Patch program, which is part of the Department of

Neighborhoods, has been thriving since the 1990s and is continuing to reform zoning codes to allow agriculture in creative locations (Erikson et al, 2009). San Francisco recently implemented a new Urban Agriculture program which will work to update codes and create partnerships among agencies and stakeholders to encourage urban agriculture in the city (City of San Francisco, 2013). Chicago completed an update to its zoning code in 2010 to accommodate community gardening and urban agriculture (Chicago UAU, 2013).

Some of the most successful cases involve intermediate parties who navigate the gaps between practitioners and government. This party may take the form of government or extension agents (Reynolds, 2011; Smit et al, 2001), lawyers or researchers (Witt, 2013; Lachance, 2004), mainstream literature (Madigan, 2009), or local advocacy groups (UAU, 2013; Osborn & Iggoe, 2007). These parties can act as bridges, navigators, and translators so that urban farmers and local government can join a larger, more productive conversation about urban agriculture.

This research sought to address the urban agriculture conversation taking place in Los Angeles County. Cynthia Hubach of the LA Food Policy Council released a report in 2012 analyzing the land-use regulations of nine cities in LA County (Hubach, 2012). However, she noted that these cities were not chosen based on systematic methodology, but based on local recommendations and learning of other sites by happenstance (personal communication, March 28, 2013). This research encompasses the entire county and paints a comprehensive picture of agricultural regulations.

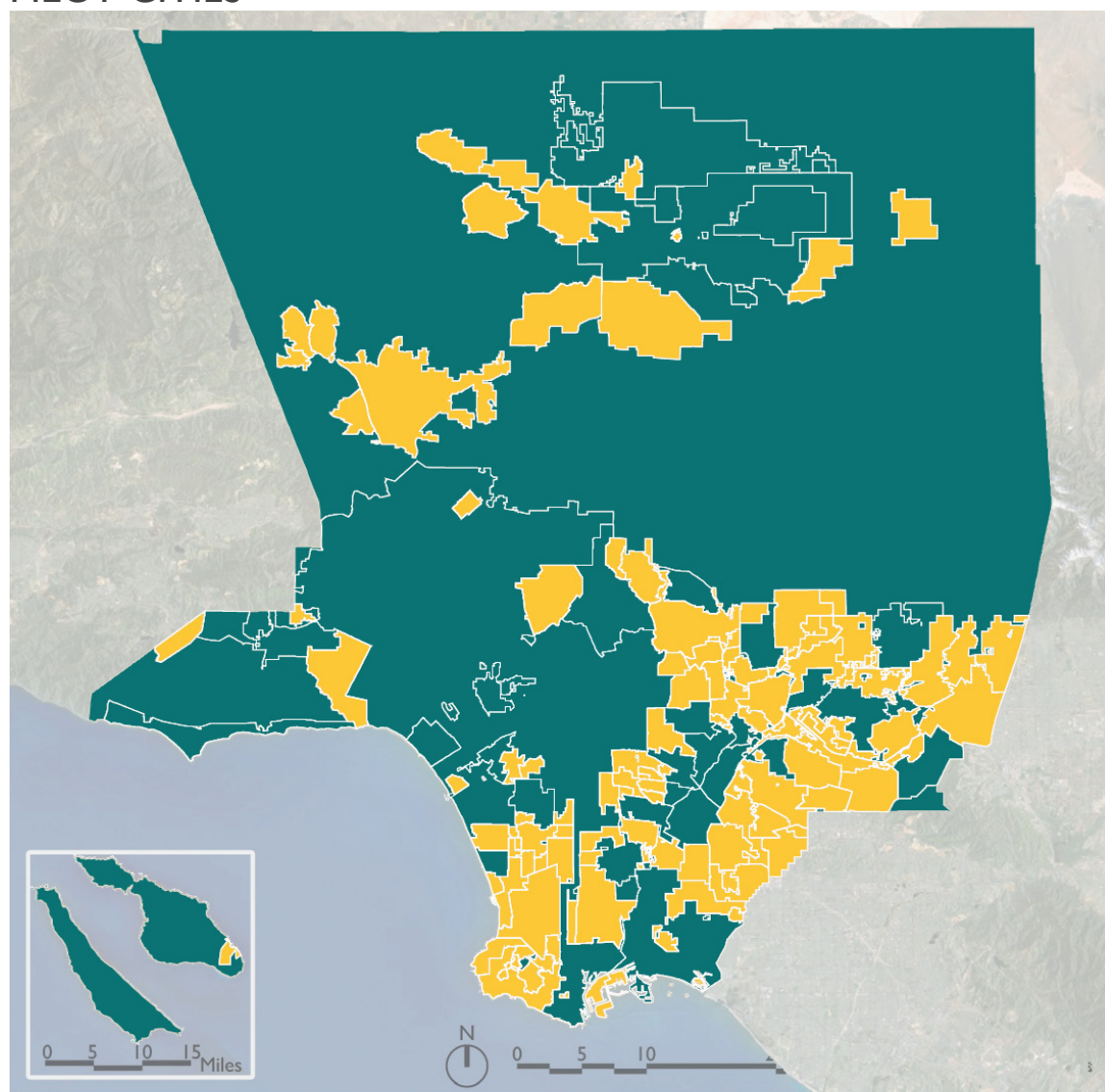
METHODOLOGY

The methodology changed throughout the course of the research. The process was iterative: throughout the study, research led to new ideas, which led to new research, which led to new ideas. Several changes to the methodology occurred, the most significant following a pilot research period. Subsequent changes occurred during the second phase

Pilot Cities:

Agoura Hills
 Arcadia
 Baldwin Park
 Bell Gardens
 Beverly Hills
 Calabasas
 Santa Clarita
 Commerce
 Compton
 Culver City
 Diamond Bar
 Downey
 Glendale
 Glendora
 Inglewood
 Lancaster
 Long Beach
 Los Angeles
 Malibu
 Manhattan Beach
 Montebello
 Monterey Park
 Palmdale
 Pico Rivera
 Santa Clarita
 Santa Monica
 South Gate
 Unincorporated areas (Los Angeles County)
 West Covina
 West Hollywood

PILOT CITIES



LEGEND

■ Pilot Cities
 ■ Other Cities

Map of the 30 pilot cities used during the initial methodology.
 Source: Base Map: ESRI; Data collected by researchers

of the research, for consistency between researchers.

Initial Methodology

Researchers began with a pilot list of 30 cities (see sidebar for the list of cities) in an effort to identify best practices and get a baseline understanding of agricultural activities currently being regulated, with particular interest in common themes across cities. The 30 cities were selected based on a set of characteristics (geography, density, size, and so-

cioeconomics), from which basic trends were identified. Research was oriented towards creating an exhaustive list of agricultural activities, whether regulated or unregulated in municipal and zoning codes. Researchers envisioned an end product characterizing the typologies upon which various cities based their municipal codes and defined the same urban agricultural activities. The information would be useful to future policy-makers and code-writers, offering a range of definitions and showcasing best practices for regulations.

Cities do not share a standard definition of urban agriculture and many cities do not define it or reference it at all.

Fauna is often regulated within sections of municipal codes' public welfare codes other than zoning (example: Animals, Public Health and Safety).

Aquaponics -
When food is grown and fish are raised in a closed-loop nutrient cycle.

Researchers established an online search protocol based on the terms in the definitions section of the agriculture zone of the City of Los Angeles zoning code (example: "agriculture," "chicken," "bees," "farm," etc.). Searching codes hosted on city websites and external code databases, researchers recorded the definitions and regulations related to 38 search terms in a table and a text document. Researchers also noted relevant agriculture policies and sustainability agendas in the pilot 30 cities. Cities in California are required to have a sustainability element within their general plan; however, urban agriculture is not required to be included therein and many cities do not have policies related to urban agriculture. Researchers considered contacting city officials using a pre-approved script, which would have included questions about urban agriculture policies, but ultimately decided to focus on policies expressly communicated in official documents like sustainability agendas, general plans, and municipal codes.

Findings from the review of the pilot 30 cities included:

- Cities do not share a standard definition of urban agriculture and many cities do not define it or reference it at all.
- Fauna is much more highly regulated than flora.
- Fauna is often regulated within sections of municipal codes' public welfare codes other than zoning (example: Animals, Public Health and Safety).
- Many city zoning codes do not designate a specific agriculture zone and other cities have hybrid zones like Residential-Agricultural.
- The research process is iterative and researchers often must double back on work previously believed to be complete.

Revised Methodology

After completing the research on the pilot list of 30 cities, as well as meeting with project client Rachel Surls of UC Cooperative Extension - Los Angeles, researchers revised the methodology and the plan for end products. Rather than organizing a table and an appendix by a series of search terms, the revised methodology cross-tabulated urban agricultural activities with cities. The revised documents were designed to enable researchers, policy-makers, and residents to search by agricultural activity or by city, to see what is regulated and where. The scope of the final research was all 88 cities in Los Angeles County. While some cities have adopted sections of the Los Angeles County Code for municipal use, the County is not included as an entity in this analysis.

To determine the agricultural activities on which to focus, researchers considered the findings from the review of the pilot 30 cities. As fauna tended to be regulated more often and more stringently than flora, animal keeping and animal husbandry encompassed a plurality of the 15 agricultural activities studied in the final analysis. Based on how fauna were defined and regulated in the 30 pilot cities, researchers grouped certain activities together for the 88 cities. For example, fowl includes poultry, chickens, roosters, turkeys, hens, geese, pheasants, and eggs. And while researchers observed niche agricultural uses in practice, such as aquaponics at Whisper Farms, this area of agriculture was not addressed in the 30 pilot cities, and therefore not included in further research of the 88 cities.

All zoning regulations that addressed any of the 15 agricultural activities were listed in an Land Use Regulation Chapter appendix, sorted by city. Many regulations in the appendix also came from other sections of cities' municipal codes, like Animals, Public Health and Safety, or Public Welfare, Morals, and Conduct codes. Since agricultural activities are frequently regulated differently in different zones of a given city, researchers also noted whether or not each city designated an agriculture zoning category among its land uses.

Aquaculture -
Farming of aquatic life for consumption, such as mollusks, crustaceans and fish. Aquaculture can use fresh or salt water, but the cultivation of aquatic life takes place in a controlled environment.

Specific methodology used to compile the primary research for all 88 cities was as follows:

- Locate municipal and zoning codes on city website or on external code database.
- Search entire codes for all relevant references to all agricultural activities. Search for the words representing the agricultural activity itself, as well as all designated search terms (listed below).
- Note 'Y' in spreadsheet if the agricultural activity is permitted (even if permitted with conditions or only in certain zones) and 'N' if the agricultural activity is never permitted. If there is no mention of the agricultural activity in the city code, leave field blank (See pages 28-30).
- Note all code sections where each agricultural activity is regulated in each city in the Land Use Regulation chapter appendix.

Agricultural activities and search terms were searched and coded for all 88 cities as follows:

- Agricultural Waste
[agricultural waste, green waste, compost, mulch, worm]
- Aquaculture
[aquaculture]
- Bees
[bee, apiary, hive]
- Fish
[fish]
- Farms
[farm]
- Fowl
[fowl, poultry, chicken, rooster, turkey, hen, goose, pheasant, egg]
- Fruits/Vegetables
[fruit, vegetable, crop, nut, berry]



Whisper Farms uses aquaponics to grow several varieties of flora, a use that was not addressed in the 30 pilot cities. Photograph by Kelly Rytel, Whisper Farms, Pasadena, CA

- Garden
[garden]
- Goats
[goat]
- Heavy Livestock
[livestock, cattle, cow, dairy, sheep, ox]
- Horses
[horse, equine]
- Horticulture
[horticulture, ornamental, flower]
- Nurseries
[nursery, nurseries]
- Pigs
[pig, hog, swine]
- Rabbits
[rabbit]

Limitations

The 88-city research focused solely on existing regulations which specifically pertain to urban agriculture. The research did not delve into other regulations that, through their competing interests, might prohibit agricultural activities. For example, a man in Orlando, Florida was ordered to remove his front yard vegetable garden and cited for violating section 60.207 "Failure to maintain groundcover on property" of Orlando's Land Development Code (Kurutz, 2012). Cities in Los Angeles

DEFINING FOWL



FOWL



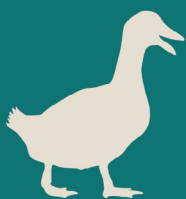
FOWL



FOWL



FOWL



FOWL

Source: The Noun Project - Chicken designed by Carly Canderlee; Turkey designed by Matt Steele; Duck designed by Isabel Martínez Isabel; Goose designed by José Hernandez

County may have similar restrictions, but they were not the focus of this research. Finally, while researchers browsed sustainability elements, general plans, and policy statements on city websites, the only materials referenced in the final table and appendix are regulations and ordinances contained in municipal codes. Regulations and ordinances represent the rule of law, which is distinct from the cyclical nature of politics, policy, and enforcement.

Challenges

The Complexity of Regulation

The data produced from the research revealed several trends. Each of the 88 cities has different regulations and employs a variety of typologies for grouping urban agriculture activities. Some cities have adopted sections of the Los Angeles County Code (most frequently the section on Animal Control), while prescribing their own regulations throughout the rest of the municipal and zoning codes. Adding to the complication are the unincorporated areas of Los Angeles County which are not regulated by any city and which may be regulated by the county or by a combination of the county and the local district (Altadena is the most noteworthy example of an unincorporated area with its own urban agriculture policies and culture).

Disunion of Definitions

Nearly every municipal code has a definitions section. These sections specifically define many of the search terms included in this study. However, it is common for terms to be placed under a broader definition, which may be different from the broader agricultural activities that researchers identified in this study. For example, Calabasas defines “farm animal” as “cattle, donkeys, fowl, goats, horses, mules, poultry, sheep, swine, and other animals determined by

the director to be not commonly regarded as household pets” (Calabasas, California, Municipal Code §17.90.020). Furthermore, definitions change between cities. Fowl has the widest range of interpretation between cities. Differences in definitions of the same physical flora and fauna result in complicated codes that are difficult to understand.

FINDINGS

AGRICULTURAL ACTIVITIES STATISTICS

Researchers compiled a table and an appendix with data on the agricultural activities allowed in all 88 cities in Los Angeles County. Statistics from each activity are summarized below (see Appendix for complete data). Each agricultural activity is categorized as permitted, prohibited, or not referenced in the municipal and zoning codes. No agricultural activity is actively regulated, permitted or prohibited in every city; many city codes make no mention of many agricultural activities.

Agriculture Zones

Out of the 88 cities in the County, 33% have specifically designated agriculture zones. Of those cities, 41% are located within the San Gabriel Valley.

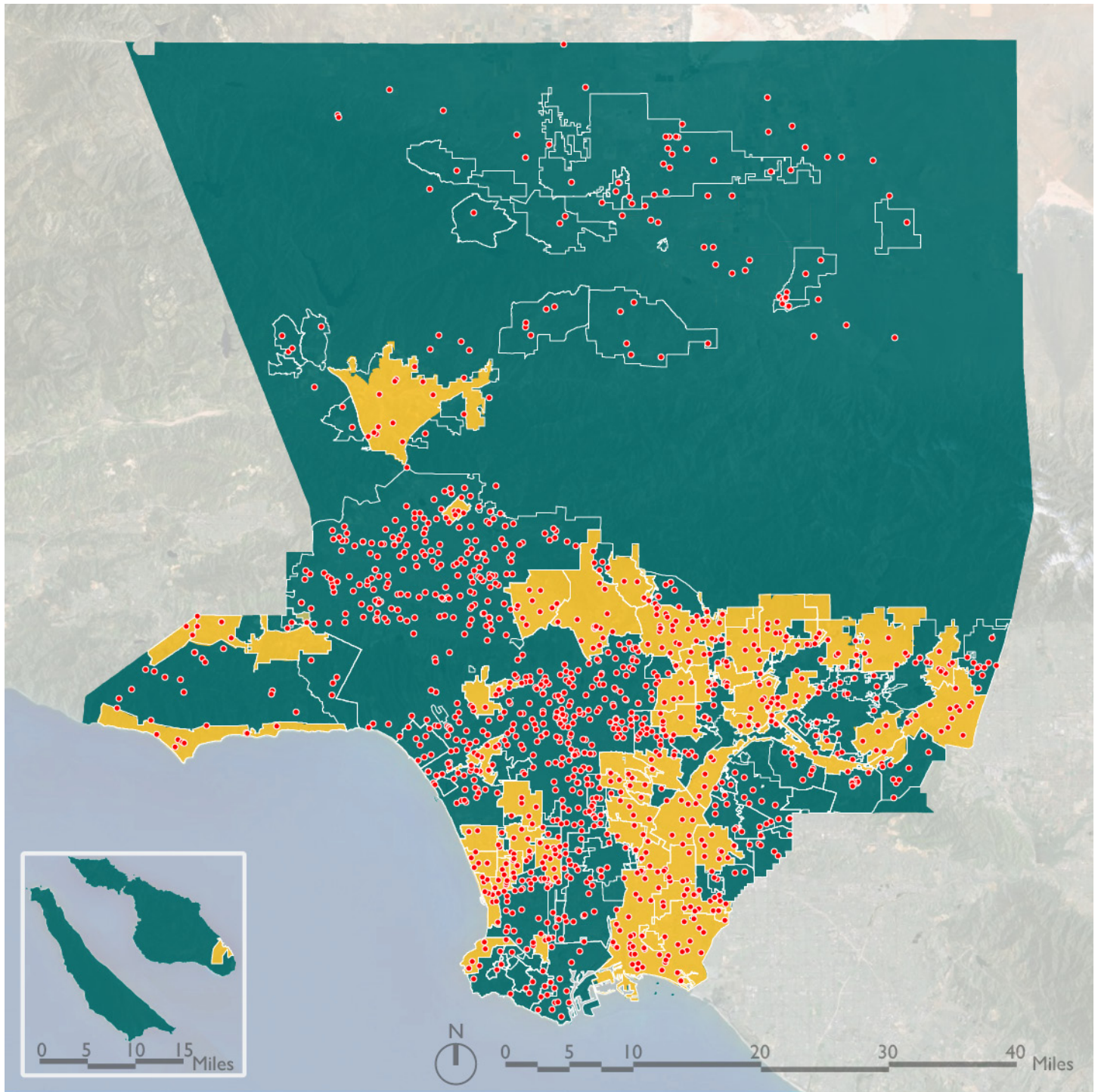
Agricultural Waste

Forty-five cities allow for the personal use or transport of agricultural waste (or green waste or compost), while only one city (Duarte) prohibits it. Forty-two cities do make mention of agricultural waste in their municipal or zoning codes.

Aquaculture

Aquaculture is the least regulated agricultural activity, as only the City of Artesia allows the confined production of aquatic life.

AGRICULTURAL ZONES AND SITES



LEGEND

- Urban Agriculture Site
- Designated Agricultural Zone in City Code
- No Designated Agricultural Zone in City Code

Map showing cities (and L.A. County) with designated agriculture zones within their zoning codes as well as the location of actual urban agriculture sites. This map illustrates that actual land use frequently does not follow the established municipal and zoning codes.

Base Map Source: ESRI; Data collected by researchers

Thirty-three percent of the 88 cities within the County have specifically designated agricultural zones.

Bees

Thirty-five cities permit apiculture, usually in specific zones and with conditions. Just 21 cities expressly prohibit apiculture, while 28 do not mention bees (or apiaries) in their municipal codes. Forty-two cities reference bees in their municipal code and 21 cities reference them in their zoning code (sometimes bees are referenced in both).

Fish

Thirty-nine cities permit fish or fish-keeping, one city (Gardena) prohibits fish, and 48 cities do not regulate fish.

Farms

Twenty-one cities permit farms, none prohibit them, and 61 cities do not mention farms in any regulation or ordinance within their municipal or zoning codes.

Fowl

Seventy-five cities permit fowl in some form under certain circumstances, while just seven cities explicitly prohibit fowl. Fowl is referenced in 59 cities' municipal codes and 49 zoning codes (sometimes both), although six cities do not reference any terms in this category at all.

Fruits/Vegetables

Fifty-one cities permit the growing or distributing of fruits and vegetables (or crops or nuts or berries), none prohibit it, and the agricultural activity is regulated by 44 zoning codes and 12 municipal codes.

Gardens, Horticulture, and Nurseries

Forty-eight cities permit gardens, 50 permit horticulture, and 68 permit nurseries. Fruits/vegetables, gardens, horticultural activities, and nurseries are not prohibited by any city, but many cities do not reference any of these words (activities) anywhere in their municipal or zoning codes.

Goats

Fifty-three cities permit goats, 11 prohibit them, and 24 cities do not regulate goats. Goats are regulated within 42 zoning codes and 35 municipal codes.

Heavy Livestock

Heavy livestock are permitted in 59 cities and prohibited in 14. This category of urban agriculture is referenced in 51 cities' zoning codes and 43 municipal codes.

Horses

Horses are permitted in 65 cities, while nine cities prohibit them. Horses are referenced 52 times in zoning codes and 40 times within municipal codes.

Pigs

Thirty-six cities permit pigs; 25 cities prohibit them. Pigs are regulated by 36 municipal codes. Pigs are zoned for in 33 codes.

Rabbits

Rabbits are permitted in 58 cities and prohibited in just five. Rabbits are referenced in 41 zoning codes and 36 municipal codes.

MOST AND LEAST REGULATORY CITIES

Beverly Hills does not specifically permit any of the 15 agricultural activities that researchers searched for in the municipal and zoning codes. The City prohibits bees and fowl and does not make mention of any of the other 13 agricultural activities. The City's zoning code does not designate any portion of the city for agriculture. Avalon, Bell, Maywood, and West Hollywood also fail to regulate 13 out of the 15 urban agriculture activities within this study.

Ironically, the City of Gardena, which has the word "garden" in its name, prohibits more agricultural activities than those of any other city, outlawing seven areas of urban agriculture. Carson and Inglewood each prohibit six

What's All the Buzz About? Regulating Bees.

Bees are an important component of a healthy agricultural system. Within Los Angeles County, just 35 cities permit apiculture, usually in specific zones and with conditions. Twenty-one cities expressly prohibit apiculture, while 28 do not mention bees (or apiaries) in their municipal codes and zoning codes. The following table demonstrates how differently bees are regulated throughout the County.

City	Unincorporated County	Diamond Bar	Duarte	Lawndale
Regulation	Permitted	Permitted	Prohibited	Permitted
Municipal Code	Premises in Zone [A-1, A-2, C-R, R-R] may be used for: Raising of... bees... and other similar animals of comparable nature, form and size, including hatching, fattening, marketing, sale, slaughtering, dressing, processing and packing and including eggs, honey or similar products derived therefrom, on a lot or parcel of land having, as a condition of use, an area of not less than one acre. (\$22.24.070, \$22.24.120, \$22.28.290, \$22.40.190)	Every person maintaining an apiary on premises other than that of his residence shall identify such apiary by affixing a sign thereto showing the name of the owner or person in possession of the apiary, his address, his telephone number, if any, and if there is no telephone, a statement of that fact. Persons... shall affix the required sign on the longer side of the hive or longer side of the super, prominently located on the entrance side of the apiary, and shall at all times maintain such sign thereon. Such signs shall be in black letters at least one inch in height on white or other contrasting color. (\$6.04.010, \$6.04.020)	No person shall keep or maintain, or suffer or permit to be kept or maintained, upon premises owned or controlled by him or it, in the city, a hive of bees. This section shall not apply to the keeping of bees within an educational institution for study or observation, or within a physician's office or laboratory for medical research, treatment, or other scientific purposes, provided they are not permitted to fly at large. (\$8.04.560)	Persons possessing an apiary within the city shall obtain a wild animal permit... Unless modified by the planning commission, each of these provisions shall be applicable as development standards to all apiaries within the city: 1) Apiaries are permitted in the manufacturing and agricultural zones only. 2) A maximum of five colonies, one queen plus brood, shall be permitted. 3) Apiaries shall be located one hundred feet from any use and shall not be kept and maintained at a lesser distance unless the owner of the apiary first obtains notarized consent from occupants of all adjacent properties. 4) Apiaries must be located a minimum of fifty feet from adjacent property lines. 5) Apiaries shall be located at least one hundred feet from all public roads and at least two hundred feet from freeways. 6) Apiaries shall be located one hundred fifty feet from parking lots with a large capacity. 7) An adequate, accessible water supply shall be provided and kept available at all times for the apiary. 8) All apiaries located near schoolyards or places where people congregate shall be located and maintained behind barriers, natural or otherwise, to cause bees to fly a high altitude over such schoolyards or places where people congregate. (\$6.12.040)

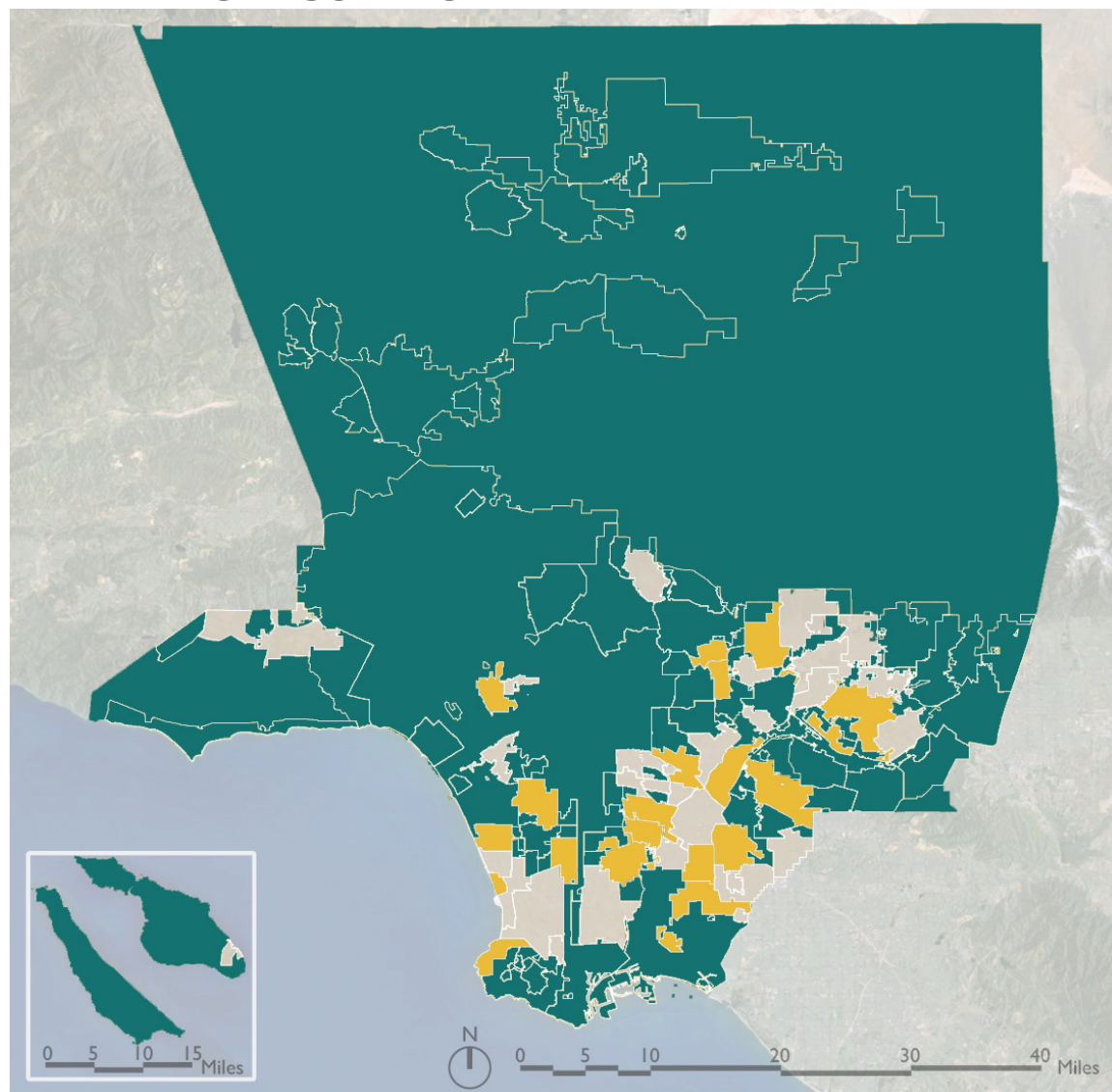
The codes for each city vary with regard to specificity and location. Lawndale requires between 100 and 200 feet of buffer space, depending upon the adjacent land use. Lawndale also limits the number of colonies and queens permitted. Although Duarte prohibits bees, it makes an exception for research and educational purposes. And Diamond Bar, while not specifically permitting bees, does have regulations regarding the proper signage of hives. Municipalities could better serve residents by simplifying and clarifying codes, and adopting uniform definitions and regulatory language for the same activities. Now wouldn't that "bee" sweet?

*An apiary such as this one at Growing Home in Diamond Bar would not be permitted by many municipal codes.
Photograph by Zachary Zabel,
The Growing Home, Diamond Bar, CA*



Thirty-five cities permit apiculture, usually in specific zones and with conditions. Twenty-one cities expressly prohibit apiculture.

BEEKEEPING REGULATION



LEGEND

- Permitted
- Not Permitted
- No Regulation

*Map showing which municipalities allow, prohibit, or do not regulate beekeeping.
Base map source: ESRI; Data collected by researchers*

of the 15 urban agriculture activities studied by researchers.

Rosemead, San Dimas, and San Fernando each permit 14 of the 15 categories. The former two cities also designate agriculture zones in their zoning codes. The Los Angeles County code regulates and allows for (with permits in some cases) all 15 categories of urban agriculture.

MUNICIPAL CODES VERSUS ZONING CODES

While zoning codes traditionally dictate land uses, when it comes to urban agriculture, municipal codes are very controlling. Health and safety regulations and nuisance ordinances encompass a significant proportion of all rules relating to agricultural activities. Researchers discovered 44% of all agriculture-related regulations and ordinances occur in

places other than the zoning code. Few cities regulate agricultural uses solely within the zoning code (Bradbury is one example), while 53 cities have regulations within both the zoning code and other sections of the municipal code. The City of Santa Clarita's zoning code and municipal code regulations overlap more than those of any other city's codes. The agricultural activities associated with fowl, horses, and heavy livestock have more overlap between zoning and other municipal code regulations than other urban agriculture activities.

Hosting regulations in separate sections of the codes creates conflict. In Duarte, the animal code prohibits bees (§8.04.560), yet the zoning code allows bees with a Minor Use Permit (§19.20.020). Chicken and rooster regulations, which are both classified under "fowl" for this project, are another example of the dispersal of regulations within zoning codes. The City of Covina's zoning code permits chickens in three different zones and makes no mention of roosters; however, the municipal code has dozens of specific regulations regarding noise and public nuisances (§9.40). The noise regulations and public nuisance descriptions could easily be interpreted to prohibit roosters from the city, even though roosters are simply male chickens.

Lomita presents a flexible interpretation for agricultural animals within its city, permitting "farm pets" in the Residential/Agriculture zone, which are defined as "chickens, donkeys, ducks, geese, goats, horses, mules, sheep, turkeys, and such other similar animals which in the opinion of the Lomita Planning Commission are neither more obnoxious nor detrimental to the public welfare than the animals enumerated above." Up to 12 of such farm pets may be kept on a property, subject to additional conditions specified in regulation (§11.1.30.08).

ACCESSIBILITY OF CITY CODES

Most cities post their municipal and zoning codes on external databases, which are typically linked from the cities' websites.

The three largest online databases, which are operated by physical publishing companies, are American Legal Publishing Company, Code Publishing Company, and Quality Code Publishing. All three companies provide usable online platforms with search functions and links between relevant regulations and ordinances. Researchers were able to easily navigate the zoning and municipal codes which were posted on these three databases, while codes which were posted on city websites and other servers tended to be more difficult to navigate and search. Two cities, South El Monte and Bell, required in-person visits to their respective City Halls, as their municipal codes were not available digitally.

The three major code publishing companies update their online databases regularly, often quarterly with the most recent regulations and ordinances. For example, Quality Code Publishing had the following caption below the City of Industry municipal code, "Current through Ordinance 776-U and the April 2013 code supplement." Some online codes have disclaimers stating that they are not to be assumed to be up to date and that viewers should visit City Hall to confirm current and accurate regulations.

SIZE AND INTENSITY RESTRICTIONS

Of the cities that permit agricultural uses, many have provisions to limit the size of the operations. Calabasas allows the keeping and raising of animals (defined as large and small) within two zoning districts but considers them "hobby farms" not to exceed 20,000 SF and prohibits sales on site (§17.12.040). Furthermore, agricultural activities are only allowed as an Accessory Use or with a Conditional Use Permit. The policy motivation behind these regulations is unclear. It is possible that Calabasas fears commercialization of small-operations, which could increase nuisances like noise or cause other environmental problems such as traffic and water run-off issues.

The permitted size and intensity of agricultural activities is often measured by a specific



Photograph by Zachary Rehm, Stanford Avalon Community Garden, Los Angeles, CA

number of animals permitted. For example, Baldwin Park allows up to three hen chickens (§153.120.140). Similarly, Pico Rivera's code states, "No person shall keep or maintain any combination of poultry, fowl, rabbits or small animals exceeding nine, or more than three of each type, kind or species upon any lot or premises in any residential zone, except in the R-E zone" (§18.50.040). These numbers seem arbitrary, with no apparent reasoning provided for limiting the total number of allowable animals. The ordinance is also unclear as to what "person" indicates, as it can be interpreted to mean that a household of four can have 36 animals. This is another indication of the nuances and confusion of municipal codes in general.

AGRICULTURAL POLICIES

As noted, cities are required to have a sustainability element as part of their General

Plan, but urban agriculture is not required as part of this element. There are, however, some cities that are actively encouraging urban agriculture in their policies. The City of Arcadia has a Smart Gardening section in their Natural Resources and Sustainability Element wherein they encourage water conservation and composting methods for backyard gardening (City of Arcadia, 2012). In contrast, Bellflower appears to be phasing out their agricultural uses. Bellflower modified its Municipal Code in 2008, and states that previously permitted animals may not be replaced once they die (§17.92.200). This is one example of a city implementing a policy which will either support or inhibit agricultural uses, without explicitly communicating a policy to that effect.

The City of Los Angeles and the City of Long Beach have incorporated pro-agriculture policies into their zoning codes. Los Angeles permits farming and nurseries under

The variable which most strongly influences agricultural regulation (and affects population density) is land area, not population.

power transmission rights-of-way (\$12.04.09). An ordinance passed in 2010 (ord. 181,188) allows for urban agriculture activities, including truck gardens in residential, commercial, and public zones. The Stanford Avalon Community Garden farm near Watts in Los Angeles is an example of how successful agricultural policy can translate into productive land use (in this case 180 medium-sized farm plots on the public right-of-way surrounded by free-ways and a rail line and topped by power lines). In Long Beach, tree farms are permitted in the public right of way (\$21.36.210). The City of Los Angeles has a designated agricultural zone, while Long Beach permits agricultural activities in other zones.

CITY ADOPTION OF COUNTY REGULATIONS

Some cities add an additional level of regulation by adopting sections of the Los Angeles County Code or using the County for permitting. Downey, Cudahy, and Lynwood have adopted Title 10 of the Los Angeles County Zoning Code, which regulates animals. Some other cities do not adopt entire sections of the County code, but require specific permits from the County. Glendale's zoning code allows bees, however the beekeeper must be a "professional beekeeper or a person who holds a current registration as a beekeeper with the County of Los Angeles department of agricultural commissioner." Diamond Bar has the same regulation in the Health and Safety section of its municipal code (\$8.25.040), which confused The Growing Home's proprietor Rishi Kumar. Mr. Kumar actively searched the Internet for information on becoming a certified beekeeper in LA County, but could not find directions or an application (personal communication, April 19, 2013).

Unincorporated areas of Los Angeles County are generally regulated by the County codes. Specific area land use plans may modify these codes, which is why researchers cannot make sweeping statements about the implementation of County codes. However, some areas are proving to be more favorable to urban agriculture than others. As detailed in

the Economics and Geography chapter of this report, Altadena is an unincorporated town in the northeast section of Los Angeles County in which fresh and artisanal goods flourish and drive the local economy.

STATISTICAL ANALYSIS

Cities which designate an agriculture zone are significantly less dense than cities which do not designate an agriculture zone. The 29 cities with agriculture zones have an average population density of 5,386 people per square mile. The 59 cities which do not zone for agricultural activities have an average population density of 8,039 people per square mile. Using the equal variances not assumed model and a 95% confidence interval, the relationship is statistically significant at the 0.05 level. The Pearson correlation is 0.244, indicating a negative relationship between zoning for agricultural activities and population density.

Not surprisingly, the presence of an agriculture zone and the number of agriculture activities that a city permits are positively related, with a correlation of 0.317 and a significance of 0.003. The City of Lancaster has a population density of 1,657 people per square mile and permits row crops, nursery stock, horses, cattle, sheep, goats, poultry, and hogs in its residential zones (Lancaster, California, Municipal Code §8.07.060). Lancaster is surrounded on three sides by desert and can hardly be called an extension of urban Los Angeles, which may partially explain why these agricultural activities are allowed. Likewise, the city of Palmdale, immediately to the south, permits 12 of the 15 agriculture activities in the study. Low density, exurban cities with lots of space and a history of agriculture tend to be more permissive of agricultural activities than high density, urban cities according to this analysis.

There is also a positive relationship between city area and total activities permitted, with a 0.228 correlation and statistical significance at the 0.05 level. The relationship between population and total activities permitted has a positive correlation of 0.167 and is not significant at the 0.05 level. Thus, the vari-

able which most strongly influences agricultural policy (and affects population density) is land area, not population. Being large like Lancaster is more significant than being populous like Glendale, where there is no agriculture zone and only four agricultural activities are permitted.

In the first half of the 20th century, agriculture was Los Angeles County's leading industry. The rich soil and warm climate were ideal for growing a variety of high value fruits and vegetables and the entire LA basin was replete with farms, ranches, and orchards. An analysis of the years each of the 88 cities were established and the number of urban agriculture activities they permit today might be expected to reveal the legacy of that history in cities' municipal codes. Many cities have decades-old regulations on animals, such as Monterey Park's 1974 ordinance, which sets fees for impounded animals (\$8.07.060); \$5 for cats and dogs, \$10 for goats and sheep, and \$25 for cows and horses. However, there is no significant correlation between the year a city was established and whether or not the city designates an agriculture zone.

RECOMMENDATIONS AND FUTURE RESEARCH

This body of research and the accompanying literature review reveal the deficiencies in agricultural regulations in urban environments. With the urban agriculture movement showing no signs of slowing, issues and questions regarding the legality of different agricultural activities will continue to surface. Some of the 88 cities and the County of Los Angeles have addressed urban agriculture in their municipal and zoning codes, while others have not. Future research and policy changes may help ease the regulatory process, facilitate newly developed intensive methods in urban agriculture currently in pilot stages around the country, and encourage the healthy, local

lifestyles that many cities promote in their general plans and soft policy documents.

RECOMMENDATIONS

Adopt Universal Definitions

Cities should adopt universal definitions for agricultural activities and urban agriculture sub-components. As cities revise their municipal codes, zoning codes, and general plans, they should incorporate clear, transparent definitions. Cities could glean common definitions from successful model codes, they could adopt the Los Angeles County definitions, or they could request modern, progressive definitions from the Los Angeles Food Policy Council. Whether or not current city leaders support urban agriculture activities is irrelevant; cities should seek to communicate the same concepts in a shared and understandable language. City leaders should work to enable their constituents to understand the land use restrictions and allowances for agricultural activities. Cities within Los Angeles County have the capacity to change the framework of regulations surrounding urban agriculture, but only if they make their definitions more universal and understandable.

Take a Stance on Agricultural Policy

Cities should look to their own general plans, sustainability elements, and stated policies to regulate urban agriculture. From there, they should take a clear policy stance on urban agriculture and determine how they want to regulate it. Many cities espouse the virtues of healthy living, buying local, and spending time outdoors in their general plans, yet fail to update their zoning codes which prohibit urban agriculture and encourage the proliferation of fast food establishments and parking lots. For example, the City of Inglewood labels itself "An Advocate for Environmental Justice" on its website, yet it prohibits six of the 15 urban agriculture activities at issue in this study. In its most recent General Plan update (2007), City leaders emphasized the need for more landscaping and less parking, while at the same time failing to plan for agricultural

Chicago: A Case Study in Urban Agriculture Zoning Reform

In the fall of 2011, the City of Chicago amended its zoning code to clarify and promote urban agriculture in the city. The City added two key agricultural activities to its zoning code: urban farms and community gardens. These uses were appended as categories within the permitted use tables in the zoning code. Now property owners and residents can more easily identify permitted agricultural activities, as the City has made it clear that it explicitly permits such activities. In addition, Chicago has included new definitions for innovative and well-established agricultural activities such as “hydroponic system,” “aquaponic system,” and “apiary.” Chicago is a model of how cities can define and add urban agriculture to their existing zoning and municipal codes.

CHICAGO URBAN AGRICULTURE ZONING DEFINITIONS

Urban Farm = Growing, washing, packaging and storage of fruits, vegetables and other plant products for wholesale or retail sales.

Community Garden = A neighborhood-based development with the primary purpose of providing space for members of the community to grow plants for beautification, education, recreation, community distribution or personal use. Sites managed by public or civic entities, nonprofit organizations or other community-based organizations that are responsible for maintenance and operations. Processing and storage of plants or plant products are prohibited on site.



The Chicago non-profit group City Farm operates an urban farm in a C1-2 zone, which now explicitly regulates community gardens as a permitted land use. Photograph by Jaemi Jackson, City Farm, Chicago, IL

waste, farms, or an agricultural zone in the City. City leaders in Inglewood are failing their citizens by not matching their zoning code with their soft policies.

In contrast, the City of Commerce has self-identified as a center for business, has a small population, a lot of pavement, and not much green-space. Farms, fruits, vegetables, gardens, and horticulture are not referenced anywhere in the city's municipal or zoning codes, which is likely a signal that city leaders simply do not think about these activities. Yet, some residents and potential urban agriculture entrepreneurs might take the lack of regulations as a sign that those activities are permitted. If city leaders and businesses do not want to promote urban agriculture in the city, they should expressly prohibit it in the municipal code or the zoning code. Taking a clear stance on agricultural policy in official city documents and codes is better than treating urban agriculture as if it does not exist. Communicating explicit

policies and regulations enables residents and interested parties to work through the proper channels if they wish to challenge or modify them.

Synchronize the Codes

Cities within Los Angeles County should strive to make their municipal and zoning codes in sync with one another. Regulations on agricultural activities should be listed within the municipal code and permitted uses related to those activities should be specified consistently in the zoning code. If bees are listed as a prohibited animal or a nuisance in the municipal code, then apiaries should not be listed as a conditional use in the zoning code. If horses are described as integral to the historical character of a city (example: Hidden Hills), then they should be referenced and positively regulated within the zoning code. If a city values commerce and industry above all else and does not want flora or fauna taking

up space that could be allocated to parking lots and warehouses, then it should identify these values with specific regulations in its municipal and zoning codes. City residents and staff would be better informed if all urban agriculture activities were called out in zoning and municipal codes as permitted or prohibited rather than left unstated, as is often the case.

City administrators and planners are unlikely to spontaneously decide to simplify, synchronize, and clarify their cities' zoning and municipal codes. With encouragement from colleagues in other cities, the business community, and their constituents, city leaders may be moved to do so. City Councilmembers should ask city staff to review zoning and municipal codes at the same time they update general plans and sustainability elements. City leaders should also work to bring their economic development teams and public works employees together to discuss ideas and goals. City residents and advocates should pressure their representatives to enact meaningful changes to urban agriculture regulation.

Cities that choose to actively support and cultivate the movement behind backyard farms, gardens, and commercial urban agriculture can either revise regulations in existing sections of their zoning codes or create urban agriculture zoning overlay districts. Recent examples of overlay districts can be found in Boston and Chicago (See Chicago case study, page 25).

FUTURE RESEARCH

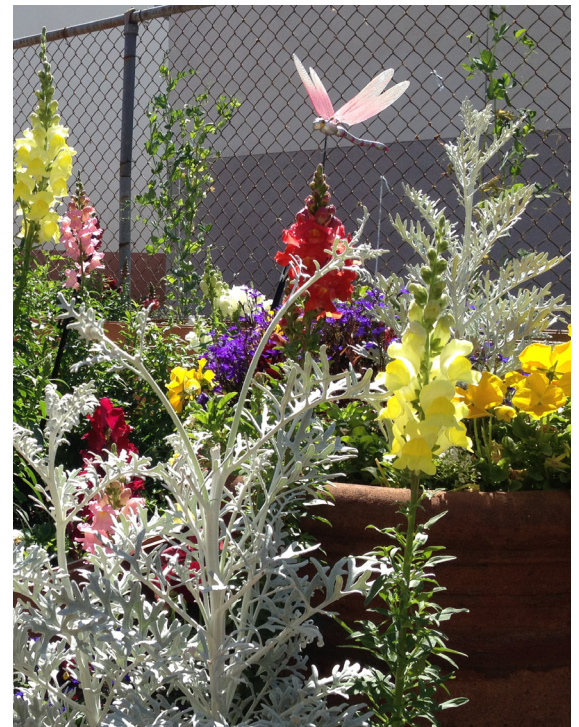
Dive Deeper into Agricultural Regulations

Research on planning and zoning for urban agriculture is limited compared to other land use activities. The data gathered for this study, while extensive, does not fully represent the regulatory landscape in Los Angeles County. As noted previously, this report does not include soft agricultural policies promoted by municipalities. Further research should

look into the cultural and social elements that guide land use; for example, the approval of conditional use permits and re-zoning applications. Additional research might also explore conditions under which unpermitted activities exist and proliferate. Future research might compare areas where flora and fauna are legal (see this chapter) with areas where flora and fauna actually exist (see the Mapping chapter of this report).

Create a Best Practices Report

Another area of research, related to the regulations above, is to identify best practices in regulating agricultural activities. No city has created a model code for urban agriculture that can be easily applied by other cities. This task can be taken on by a state entity (e.g. California Office of Planning and Research), a regional planning authority (e.g. The Southern California Association of Governments), local government (e.g. Los Angeles County), or non-profit and advocacy groups (e.g. Los Angeles Food Policy Council, American Planning Association). Any entity which establishes a best practices document will be breaking new



*Photograph by Genevieve Hernandez,
School Garden, Los Angeles, CA*

ground. During the 2013 American Planning Association National Conference in Chicago, at a session titled “Overcoming Barriers to Cultivating Urban Agriculture,” an attendee asked a panel of experts how to aggregate his small town’s health and safety code with its zoning code. The four panelists had no answer, because cities have not yet discovered the best, most effective method for going about this task.

CONCLUSION

Urban agriculture is regulated differently in all 88 cities in Los Angeles County. No city permits all 15 agricultural activities studied by this research team; nor does any city prohibit them all. Fowl are regulated more frequently than any other facet of urban agriculture, but rarely in the same way or on the same terms. One commonality between cities is that their regulations are unclear and incomplete. No city in the County has developed a clear, comprehensive policy on urban agriculture which is reflected by its municipal and zoning codes. Agricultural entrepreneurs, county residents, activists, and policy makers would all benefit from more well-defined, fully-articulated, accessible policies and codes. A best practices document with definitions and model code sections produced by a credible organization would encourage more sensible, consistent agricultural land use regulations in Los Angeles.

URBAN AGRICULTURE REGULATION REFERENCE CHART

Los Angeles County, California

How to Read the Reference Chart

"Y" = Permitted

"N" = Prohibited

Blank = No codified regulation

This table shows all the regulated and unregulated urban agriculture activities within Los Angeles County. The "Ag Zone" column indicates whether or not a city has a designated agricultural zone (including hybrid zones such as Residential-Agricultural) within their land use regulations. The 15 categories listed in the table may include additional activities, listed in parentheses:

- Agricultural Waste (agricultural waste, green waste, compost, mulch, worm)
- Aquaculture (aquaculture)
- Bees (bee, apiary, hive)
- Fish (fish)
- Farms (farm)
- Fowl (fowl, poultry, chicken, rooster,

- turkey, hen, goose, pheasant, egg)
- Fruits/Vegetables (fruit, vegetable, crop, nut, berry)
- Garden (garden)
- Goats (goat)
- Heavy Livestock (livestock, cattle, cow, dairy, sheep, ox)
- Horses (horse, equine)
- Horticulture (horticulture, ornamental, flower)
- Nurseries (nursery, nurseries)
- Pigs (pig, hog, swine)
- Rabbits (rabbit)

The Land Use Regulation chapter appendix indicates where in a city's municipal code the agricultural activity is regulated.

City	Ag Zone	Agricultural Waste	Aquaculture	Bees	Fish	Farms	Fowl	Fruits/Vegetables	Gardens	Goats	Heavy Livestock	Horses	Horticulture	Nurseries	Pigs	Rabbits
Agoura Hills	N	Y					Y	Y	Y	Y	Y	Y	Y		Y	Y
Alhambra	N			Y			Y		Y	Y	Y	Y	Y	Y	Y	Y
Arcadia	N			N			Y	Y		Y	Y	Y	Y		N	Y
Artesia	Y		Y				Y	Y	Y	Y	Y	Y		Y	N	Y
Avalon	N						Y	Y								
Azusa	N						Y	Y		Y	Y	Y	Y	Y	Y	Y
Baldwin Park	N	Y					Y		Y							
Bell	N										Y			Y		
Bell Gardens	N			N			Y	Y		Y	N	Y		Y	N	Y
Bellflower	Y				Y		Y	Y	Y	Y	Y	Y	Y	Y		Y
Beverly Hills	N			N			N									
Bradbury	Y				Y		Y	Y	Y	Y	Y	Y	Y	Y		
Burbank	N			Y			Y			N	N	Y		Y	Y	Y
Calabasas	N	Y				Y	Y	Y		Y	Y	Y	Y	Y	Y	Y
Carson	Y	Y				Y	N	Y		N	N	N	Y	Y	N	N
Cerritos	Y				Y		Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Claremont	Y			Y			Y	Y		Y	Y	Y			N	
Commerce	N	Y		N			Y			N	N	N		Y	N	Y
Compton	Y	Y		N			Y	Y		Y	Y	Y	Y	Y	N	Y
Covina	Y					Y	Y	Y		Y	Y	Y	Y	Y	Y	Y
Cudahy	N			Y			Y		Y	Y		Y			Y	Y

URBAN AGRICULTURE REGULATION REFERENCE CHART *continued...*

Los Angeles County, California

City	Ag Zone	Agricultural Waste	Aquaculture	Bees	Fish	Farms	Fowl	Fruits/Vegetables	Gardens	Goats	Heavy Livestock	Horses	Horticulture	Nurseries	Pigs	Rabbits
Culver City	N						Y		Y	Y	Y	Y			Y	Y
Diamond Bar	Y	Y		Y			Y	Y		Y	Y	Y		Y	Y	Y
Downey	N						Y			Y	Y	Y		Y	Y	Y
Duarte	N	N		Y			Y	Y		Y	Y	Y	Y	Y	Y	
El Monte	N	Y		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y		Y
El Segundo	N			N	Y		Y		Y		N					Y
Gardena	N			N	N		Y			N	N	N		Y	N	N
Glendale	N			Y			Y					Y				Y
Glendora	N	Y		Y	Y		Y		Y			Y		Y	Y	Y
Hawaiian Gardens	N						N				Y		Y	Y		
Hawthorne	N			Y			Y		Y			Y	Y	Y		N
Hermosa Beach	N			N			Y							Y		
Hidden Hills	Y	Y					Y	Y	Y			Y	Y	Y	N	
Huntington Park	N						Y	Y	Y		Y			Y		Y
Industry	N	Y		Y		Y	N		Y	Y	Y	Y		Y	Y	N
Inglewood	N			N	Y		N	Y	Y	N	N		Y	Y	N	N
Irwindale	Y	Y			Y		Y	Y	Y		Y	Y			Y	Y
La Cañada Flintridge	N	Y					Y			Y	Y	Y		Y	N	Y
La Habra Heights	Y	Y		Y						Y	Y	Y		Y	N	
La Mirada	N	Y		N	Y	Y	Y			Y	Y	Y	Y			
La Puente	Y	Y			Y		Y			Y	Y	Y	Y	Y		
La Verne	Y	Y		Y	Y	Y	Y	Y				Y	Y	Y		Y
Lakewood	Y			N	Y	Y	Y	Y		N	Y	Y	Y		N	Y
Lancaster	N			Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lawndale	N	Y		Y			Y						Y	Y	N	Y
Lomita	N	Y			Y		Y	Y		Y	Y	Y	Y	Y		Y
Long Beach	N	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
Los Angeles	Y	Y		Y		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
Lynwood	N			N			Y			Y	Y	Y			Y	Y
Malibu	N	Y		Y	Y		Y	Y		Y	Y	Y	Y	Y	Y	Y
Manhattan Beach	N				Y		Y				N	N		Y	Y	Y
Maywood	N			Y										Y		
Monrovia	N	Y			Y		Y		Y	Y	Y	Y		Y	Y	Y
Montebello	Y	Y			Y		Y	Y	Y	Y	Y	Y				
Monterey Park	N			Y	Y		Y		Y	N	N	N	Y	Y	Y	Y

URBAN AGRICULTURE REGULATION REFERENCE CHART *...continued*

Los Angeles County, California

City	Ag Zone	Agricultural Waste	Aquaculture	Bees	Fish	Farms	Fowl	Fruits/Vegetables	Gardens	Goats	Heavy Livestock	Horses	Horticulture	Nurseries	Pigs	Rabbits
Norwalk	N			N	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
Palmdale	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y
Palos Verdes Estates	N	Y		N	Y		N	Y	Y	N	N	Y	Y	Y	N	Y
Paramount	N	Y			Y		N	Y		N	N	N	Y			
Pasadena	N	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	N	Y
Pico Rivera	N			N	Y					Y	Y	Y			N	Y
Pomona	N	Y		Y	Y		Y	Y	Y	Y	Y	Y		Y	N	Y
Rancho Palos Verdes	Y	Y		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	
Redondo Beach	N				Y		Y	Y	Y		Y		Y	Y		
Rolling Hills	Y	Y		Y			Y									
Rolling Hills Estates	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
Rosemead	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
San Dimas	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
San Fernando	N	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
San Gabriel	N	Y		N	Y	Y	Y	Y	Y	N	N	N	Y	Y		Y
San Marino	N	Y		N	Y		Y	Y	Y	Y	N	N		Y	N	
Santa Clarita	N	Y		Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y
Santa Fe Springs	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y
Santa Monica	Y			Y	Y		Y		Y	Y	Y	Y	Y	Y	Y	
Sierra Madre	N	Y		Y			Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Signal Hill	N			N			Y	Y	Y		Y	Y	Y	Y	N	Y
South El Monte	N					Y						N	Y			
South Gate	N	Y		N		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y
South Pasadena	Y			Y			Y	Y	Y	Y	Y	Y	Y	Y	Y	
Temple City	N						Y				Y	Y	Y	Y	Y	Y
Torrance	Y						Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Vernon	N	Y					Y	Y	Y	Y	Y	Y		Y	Y	Y
Walnut	N	Y					Y	Y	Y	Y	Y	Y	Y	Y	N	Y
West Covina	Y	Y		N			Y	Y		Y	Y	Y	Y	Y	Y	Y
West Hollywood	N								Y					Y		
Westlake Village	N			Y			Y		Y	N	N	Y		Y	N	
Whittier	Y	Y		N	Y		Y	Y			Y	Y	Y	Y	Y	Y
LA County (including unincorporated areas)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

The background image shows a group of people gathered around a table, working on a large map of Los Angeles County. One person is pointing at a specific area on the map with a yellow pencil. Another person's hand, with purple nail polish and a ring, is visible in the lower right corner, holding a red pencil. A smaller, inset map is placed on the main map, showing a different geographical area with blue, yellow, and orange regions. The scene is overlaid with two large green circular shapes containing text.

MAPPING URBAN AGRICULTURE *A Spatial Snapshot*

How many urban
agriculture sites are in
Los Angeles County?
Where are they located?

Spatial data of existing urban agriculture in Los Angeles County is currently piecemeal at best. This chapter presents the results of comprehensive research of on-the-ground activities, which include school gardens, community gardens, nurseries, and farms. Researchers compiled lists from many sources, conducted phone calls for verification, and used Google Earth to visually document existing agricultural activities. With this methodology, over 1,300 diverse urban agriculture sites were found in Los Angeles County.

INTRODUCTION

Various governmental and non-governmental organizations are working to map and list the occurrences of specific agricultural activities in the region, but no one has aggregated all agricultural activities into an extensive database. A comprehensive collection of these data is necessary to enable the general public to take advantage of nearby urban agriculture, and to allow officials to enact informed policies to affect and encourage the development of new urban agricultural sites and support the development of gardening networks and economic development initiatives. This is unlikely to occur without the compilation of accurate documentation of the extent and diversity of agricultural production in Los Angeles County.

One of the goals of this work was to produce maps showing all documented locations of urban agriculture within the county. Subsequently, a spatial analysis was conducted to compare various census tract data to the location of the agriculture sites. The parallel goal of this work was to document the locations of urban agriculture at a specific moment in time and to establish a baseline interactive map, which can then be updated continually to reflect the constant changes taking place in this realm.

The Los Angeles Times website recently featured a collection of articles about community gardens in Los Angeles County. The project, "A Year-Long Look at Community Gardens," featured 52 articles and blog posts describing first-hand experiences in a particular community garden or describing the community garden experience in general. The introduction described community gardens as widespread, popular, and largely undocumented,

Cover photograph
by India Brookover
Los Angeles, CA



Aerial view of agriculture under power lines in Long Beach
Source: Google Maps

Finding out how many schools or community gardens are within walking distance of one's house or how many nurseries are located along one's route home from work can prove to be a fruitless endeavor.

stating “even the L.A. Community Garden Council isn’t sure about the total [number of gardens] because some gardens are growing under the radar” (Spurrier, 2010). Another recent article in the Los Angeles Times describes the re-emergence of school gardens in Southern California despite a decrease in state funding. These gardens are largely initiated by parent and community support, meaning that they are spearheaded informally and are unlikely to be included in any formal list (Simmons, 2009).

Most Los Angeles residents have read a report or heard a story from a friend about a new urban agriculture site popping up nearby. Urban gardens, small farms, and nurseries of countless varieties populate the densely built urban environment, often appearing in unexpected locations. However, finding out how many schools or community gardens are within walking distance of one’s house or how many nurseries are located along one’s route

home from work can prove to be a fruitless endeavor. Most urban residents have little awareness of the agricultural activities taking place in their communities, and even local officials are often unable to locate where these activities are occurring.

While local media outlets praise the formation of new community gardens and parents discuss their children’s new school gardens, these anecdotal stories and conversations do little to uncover the actual scale of urban agriculture in the county. How many of these gardens are there? Where are they located and at what scale?

While all of the County’s 88 cities have zoning codes, and almost all of urbanized Los Angeles County is zoned for particular land uses, most urban agriculture is located on parcels of land that are not specifically zoned for agricultural activities. Of the 88 cities in Los Angeles County, only 29 feature an agricultural

What is the true extent of urban agriculture in Los Angeles County?

What conclusions can be drawn from these data?

While activists and public officials have been promoting urban agriculture for over a century, its recent popularity has spurred on-the-ground agricultural activities which have spread too quickly for many regulatory agencies to track and regulate.

zone, which includes hybrid agriculture zones ("Residential-Agricultural" for example). In the remaining 59 cities urban agriculture is arising on land that is zoned for other purposes, and may or may not designate agricultural activities as a permitted use. Even the cities that zone for agriculture have trouble keeping up with the ephemeral nature of this activity, as gardens are often short-lived and frequently change locations.

While activists and public officials have been promoting urban agriculture for over a century, its recent popularity has spurred on-the-ground agricultural activities which have spread too quickly for many regulatory agencies to track and regulate. Local government policies lag in part because urban agricultural activities are often impermanent, scattered, and informally developed. At the same time, technical assistance providers, conveners, and funders, such as the client for this project, are in critical need of baseline data in order to prioritize their work, respond to constituents proactively, and maximize their value and role as experts in the emerging field of urban agriculture. Without a current, comprehensive list of the locations and varieties of urban agriculture, governments are unable to generate effective policy to regulate and facilitate agricultural activities.

The general public is also unaware of the full extent of local agriculture, and agricultural activists and enthusiasts may be unable to effectively understand and support these green movements without knowledge of where they are occurring. Urban agriculture organizations and resources often exist in silos and may be operating with out-of-date information and inadequate research methods for locating and representing activity sites. There is little information exchanged between non-profit, community-focused entities, such as community gardens or school gardens, and local agricultural businesses such as nurseries and farms. Trade groups, public agencies (on the city, state, and national levels), non-profit organizations, advocacy groups, and urban agriculturalists do not have a solid forum by which to exchange ideas and information.

The mapping research team found the lack of an accurate and comprehensive urban agriculture inventory intriguing and worthy of examination. The absence of information presented an opportunity to fill this void and bring the extent of urban agriculture to the surface in the form of a comprehensive and interactive map, available to anyone at any time. By documenting and mapping the diversity of urban agricultural sites, the research team sought to expand the information readily available to all stakeholders. Comprehensive maps with documented agriculture sites can serve as a spatial analysis tool for policymakers and researchers when linked with demographic data and city codes. Although more in-depth analysis is necessary to determine which causal relationships exist between agriculture sites and other geospatial data, this research begins with analysis of relationships between the sites and census tract data.

RESEARCH

The analysis in this chapter seeks to answer several questions: "What is the true extent of urban agriculture in Los Angeles County, and who benefits from an up-to-date inventory?" And: "What conclusions can be drawn from these data?"

Because urban agriculture is not static, the research team created an interactive map which will be hosted by project client UC Cooperative Extension-Los Angeles. From this map, the website host can continuously update agricultural activities with the help of website users, who will be able to efficiently provide the website operators with the location and type of new agriculture sites. Relevant demographic data will be joined with the locations of the agricultural sites. The interactive map is being hosted at UCCE's urban agriculture website, <http://celosangeles.ucdavis.edu/>.

Also included in this report are static maps of data collected during Spring 2013, which are relevant as of June 3, 2013. While the data

The mapping of urban agriculture in the United States has been limited in both its objectives and its methodologies.

Urban agricultural activities are far more abundant than policymakers and stakeholders believe.

will be updated in the interactive map, the static maps form the basis of the data analysis in this chapter. All maps displayed in this report are static and may be quickly outdated as agricultural sites change activities and locations. They are useful for examining the current state of agriculture and discussing initial findings.

LITERATURE REVIEW

Chicago Case Study

John Taylor and Sarah Lovell's paper, *Mapping Public and Private Spaces of Urban Agriculture in Chicago Through the Analysis of High-Resolution Aerial Images in Google Earth* (2012), informed the research team's methodology in documenting agricultural activity sites in Los Angeles County. Their study found that the mapping of urban agriculture in the United States has been limited in both its objectives and its methodologies, and has focused primarily on specific typologies of urban agriculture, such as community gardens and other generally accessible sites, while ignoring the extensive possibilities of backyard gardening for food production. The study used a combination of research methods that included reviewing existing documentation and scanning the entire 606 square kilometers of the city of Chicago using Google Earth in an effort to verify and map existing and newly discovered agriculture sites.

The Chicago study was based on the notion that urban agricultural activities are far more abundant than policymakers and stakeholders believe. While urban agriculture has long been acknowledged as a vital food source in developing countries, it is often labeled as a temporary and cyclical activity in the United States (Taylor and Lovell, 2012). By uncovering the full scale of agricultural activities in the urban environment of Chicago, the researchers aimed to encourage urban planners and policymakers to enact zoning amendments and other policies to foster urban food production. (See "Chicago: A Case Study in Urban Agriculture Zoning Reform" insert on page 25.)

The Chicago case study aimed to create a data set and sampling framework that could potentially be used to inform future research concerning the varying dimensions of urban agriculture in an urban setting. The following research goals and objectives were defined in the Chicago study (Taylor and Lovell, 2012):

- Identify and measure the production area of private forms of urban agriculture seldom captured by mapping efforts in U.S. cities, through a novel approach based on the manual interpretation of high-resolution aerial images in Google Earth.
- Determine the proportion of documented community gardening projects producing food, and to measure their production area.
- Identify previously undocumented food-producing community gardens and other public forms of urban agriculture, and to measure their production area.

The Chicago study utilized two techniques for uncovering urban agriculture sites in Chicago. The first was the confirmation of *documented* community gardens using aerial images. The second was the manual extraction and classification of *undocumented* sites using Google Earth (Taylor and Lovell, 2012). For the first technique, the team obtained a list of 600 community gardens from a 2005 inventory compiled by GreenNet. Researchers geocoded the location of each of these sites into a KML file so that when the file was opened in Google Earth, the community garden locations would appear in the foreground. In addition to the Green Net community garden list, the team compiled spatial data from other sources containing the locations of school gardens and urban farms. All geocoded sites were then scanned using Google Earth and either confirmed as active food producing locations or inactive locations (Taylor and Lovell, 2012).

The second technique employed by the Chicago study was aerial scanning at a 1:300 scale covering the entire city of Chicago. From

Taylor and Lovell's cumulative research in Chicago plotted residential gardens, vacant lot gardens, school gardens, urban farms, and community gardens using the geocoding method and the manual visual scanning method.

careful analysis of verified existing agriculture sites, agriculture sites were proven to contain an orthogonal garden layout, vegetation planted in rows or bed separated by paths and bare earth or mulch between individual plants or rows of plants. The entire city was scanned in Google Earth using a section-by-section method. Each section was roughly ten square kilometers in area, divided by major roads and highways, and scanned screen by screen, slightly overlapping each previously viewed area. The extraction of the urban agriculture sites through the Google Earth images proved to be highly accurate when verified through on-the-ground fieldwork.

The cumulative research plotted residential gardens, vacant lot gardens, school gardens, urban farms, and community gardens using the geocoding method and the manual visual scanning method. Taylor and Lovell concluded their efforts with an extensive data set that provided spatial information about agriculture within specific boundaries: "the results of the visual analysis of documented community garden projects, of the manual extraction and classification of undocumented sites of food production sites, and on ground-truthing were combined to create a final dataset of points and polygons for urban agriculture sites" (Taylor and Lovell, 2012). The aggregated set of points was layered into Esri ArcMap 10 and joined with a 2010 Census tract shapefile, which permitted additional spatial analysis. The census tract file included the city's 77 community areas and 228 neighborhoods, for which each garden type and garden area were attributed. The mapping also allowed for a visual analysis of the spatial distribution of the agricultural sites.

Additional Literature Considered

Initially, the mapping team considered using a strategy adopted by Judy Cheng and Colleen Ma, UCLA Geography students researching agriculture in Los Angeles County. In their project, Los Angeles County Agriculture: How Sustainable is 'Local'? (2012), Cheng and Ma conducted a georeferencing project to identify existing farmlands, and discover

potential sites suitable for agriculture based on remote sensing technologies. However, remote sensing is less applicable to urban agriculture for three reasons:

1. Precision. The coarse-grain format (30m x 30m) of remote sensing data substantially reduces the visual clarity of sites in urban areas. A parcel of (50' x 150', or 15m x 45m) urban agriculture within one of these grids may not be identified accurately.
2. Clarity. The remote sensing imagery patterns of urban agriculture sites may be less distinctive from the surroundings. On one hand, all vegetated areas such as forests, parks, street tree rows, residential backyard gardens, and slope protections with similar dimensions of urban growing sites may have overlapping wavelength bands, and thus become interference sources. On the other hand, buildings and infrastructure may obscure agricultural sites.
3. Definition. Because of the difficulty of distinguishing agriculture from other vegetated land, and the obscuring of buildings and infrastructure by buildings, clearly defined sites may be determined solely by remote sensing.

The mapping research team ultimately determined that extraction methods based on the Chicago study would yield the most accurate results.

METHODOLOGY

The idea for the mapping project was conceived in January 2013, at the beginning of the comprehensive research period. The goal of the research was to map urban agricultural sites in Los Angeles County and some parameters were established. Because urban agriculture has not been formally defined and encompasses a broad spectrum of categories ranging from chicken farms to flower nurseries, it was necessary to limit the scope of research to a consistent and manageable scale.

**Research
Typologies:**

- Community Gardens
- School Gardens
- Nurseries
- Farms

**The researchers
focused on
agricultural
activities on
public and
commercial land.**



Mapping Team in Action
Photograph by India Brookover, UCLA, Los Angeles, CA

Thus, the mapping research team narrowed the scope of the research to sites that focus on the following:

Crop-based Products (no livestock or animal husbandry)

- Food
- Ornamentals

Typologies

- Community Gardens
- School Gardens
- Nurseries
- Farms

While the project's methods and goals were inspired by Taylor and Lovell's study, researchers focused on agricultural activities on public and commercial land (and not on private backyard gardens) for several reasons.

- Los Angeles County has a different spatial and ecological structure than Chicago and private backyard

gardens are ubiquitous throughout the 88 cities.

- Los Angeles County has a long history of commercial urban agricultural activities and the team was interested in documenting the recent resurgence.
- The project client requested that the research include commercial growers to assess the scope of the local agricultural industry.

The mapping research team organized urban agriculture into two categories and four typologies. The categories were divided between non-profit community-oriented sites and commercial growers. Typologies nested under the first category were community gardens and gardens at K-12 public schools. Farms (including vineyards) and nurseries (including orchards) were classified under the second category. Initially, the team was also interested in researching and mapping rooftop gardens. However, after a cursory search for relevant inventories and scanning Google Maps, the researchers found very few gardens

During the pilot study, researchers established an efficient and comprehensive strategy for mapping agricultural sites across the county.

and little evidence of rooftops being used for anything other than landscaping.

Similar to the Chicago study, the research strategy involved two stages:

1. Collecting inventories, lists, and databases of agricultural sites; and plotting documented sites.
2. Using Google Maps to visually scan for sites that were not originally found in the inventories and databases.

Initial Methodology

While the Chicago study provided the basic parameters for research, the specifics of the research and mapping process were not well defined. Therefore, researchers established a pilot study to inform the specific methods for the final research methodology. During the pilot study, researchers established an efficient and comprehensive strategy for mapping agricultural sites across the county. In order to narrow the research down

to a sample size, researchers selected a range of cities from different areas in Los Angeles County, which included:

Urban Core

- Long Beach
- West Hollywood

Suburban

- Alhambra
- Compton
- El Monte
- Inglewood
- Monterey Park
- Pico Rivera

Exurban

- Santa Clarita

Industrial

- Commerce
- Vernon
- City of Industry

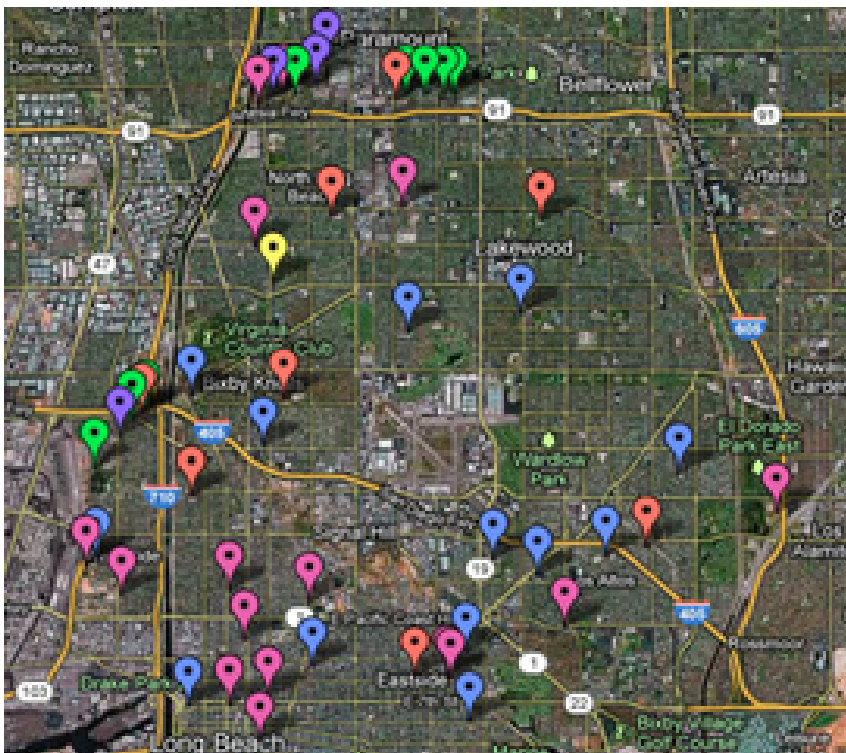
Rural

- Acton
- Littlerock

Unincorporated

- Altadena
- Avocado Heights
- East Los Angeles

Each member of the mapping research team looked at all public databases and open private databases provided by local and national organizations. Researchers searched for city, state, and county inventories, as well as information from non-profit advocacy organizations, trade organizations or even news media. All databases, lists, and inventories were compiled into a single spreadsheet, which researchers combed for sites located in sample cities and census-designated places (CDP). The sites were plotted and color-coded according to their typology on separate maps. As a first attempt at using varying mapping



*Initial draft map from pilot study of agriculture locations in Long Beach.
Base map source: Google Maps;
Data collected by researchers*

The revised methodology aimed to create an accurate inventory of all urban agriculture sites in Los Angeles County over a three-month time line.

A major change in strategy was for each researcher to conduct initial inventory research for one of the four typologies across the entire county.

research techniques, team members used both Google Maps or Esri ArcMap 10 to map the data.

After the inventoried sites were plotted, the researchers developed a uniform list of key terms to search for on Google Maps:

- "community garden"
- "farm"
- "garden"
- "grower"
- "plant nursery"
- "orchard"
- "ranch"

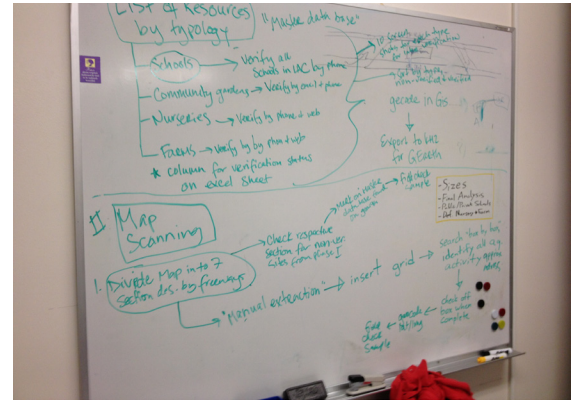
The sites found using search terms were color-coded according to their typology and plotted on the relevant maps. Finally, each city and CDP was visually scanned on Google Maps to find undocumented sites. The team compiled a master database, organized by region, of all agricultural sites, their respective typologies, inventory sources, and locations.

Analysis of the pilot study revealed the following flaws in the initial methodology:

- Lack of comprehensive data. Using search terms in Google Maps to display agriculture sites was an incomplete and unreliable method of extracting locations. Numerous sites were omitted by Google, and many locations revealed by Google were not in fact agriculture sites.
- Typology-specific research. The team discovered that the four typologies varied widely in how they were documented or represented on Google Maps, and it was impractical to search for them using one umbrella method.
- Inefficiency of research. With each researcher assigned to his or her own region and responsible for conducting searches on each of the four typologies, many research hours were required for a relatively small area of the county.

- Duplicated effort. To continue with this method would mean that each member would need to conduct research for all four typologies across an area roughly one-seventh of urban Los Angeles County.

Given the time constraints of the project, the team streamlined the approach in order to obtain an efficient and accurate methodology.

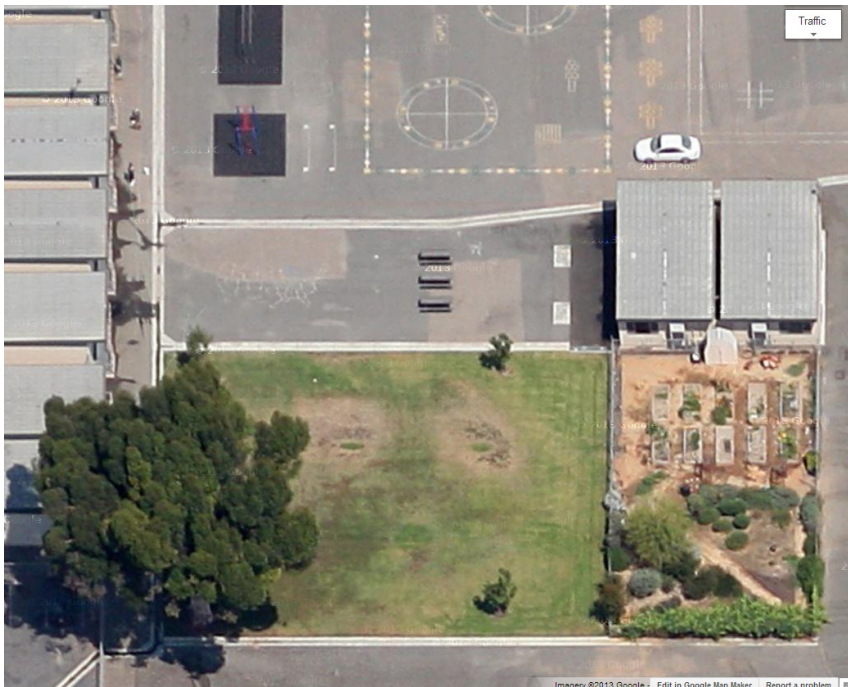


Brainstorm of Revised Methodology
 Photograph by India Brookover, UCLA, Los Angeles, CA

Revised Methodology

The revised methodology aimed to create an accurate inventory of all urban agriculture sites (of the four typologies) in Los Angeles County over a three-month time line, drawing on the limitations and lessons learned during the pilot study. The revised methodology retained several elements from the initial methodology, including plotting documented sites from collected inventories and visually scanning Google Maps for any undocumented sites. Verified agricultural sites from the pilot study were included in the revised database.

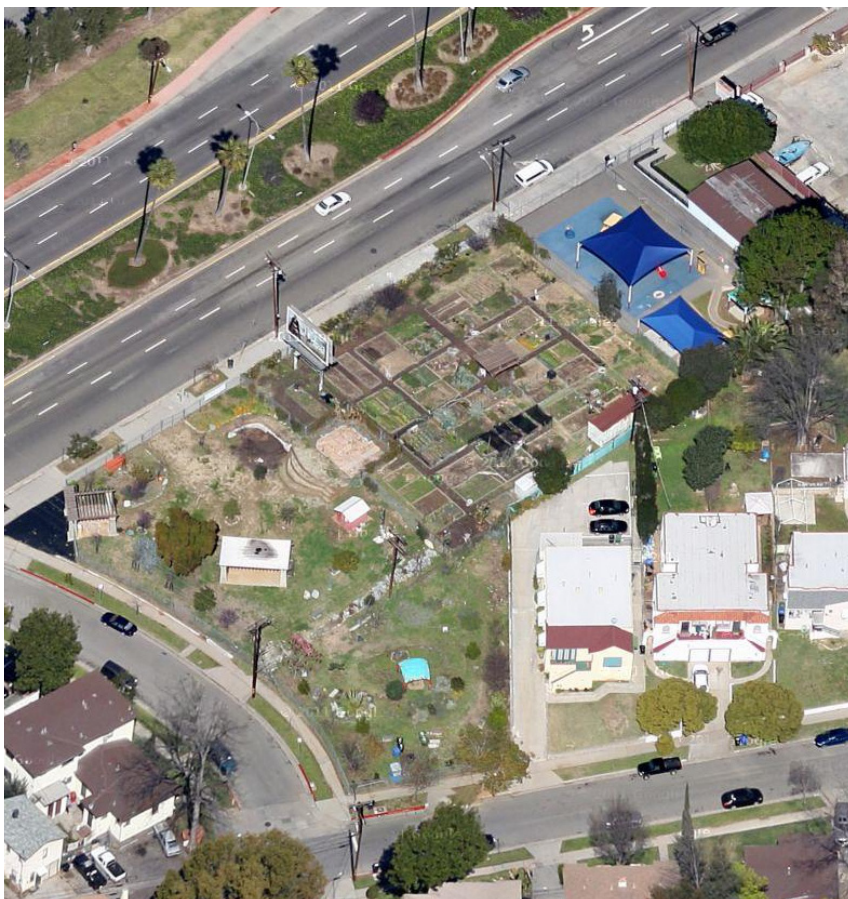
For most of the typologies, one inventory was used to find the majority of locations, while a few additional locations were found through other inventories or databases. Thus, a major change in strategy was for each researcher to conduct initial inventory research for one of the four typologies across the entire county. Researchers determined that methods for extracting information varied for each typology. The methodology for each of the four typologies is detailed on the next page.



Aerial Scan of School Garden in Long Beach
Source: Google Maps

School Gardens

Two mapping research team members researched school gardens by obtaining a list of contact information from the Los Angeles County Department of Education for all public schools in the 80 districts, from pre-kindergarten through 12th grade, via the online L.A. Public Schools Directory. Researchers contacted each school by phone and asked if the school grounds currently featured a school garden (edible or otherwise) that was planted and tended to by students. Researchers obtained primary-source information from over 1,000 schools. Though time consuming, this method ensured time-sensitive accuracy regarding school garden locations. Researchers asked respondents from each school about any kind of agricultural activity that took place on site, as school gardens range from extensive plotted areas to small planter-boxes used for gardening.



Aerial Scan of Community Garden
Source: Google Maps

Community Gardens

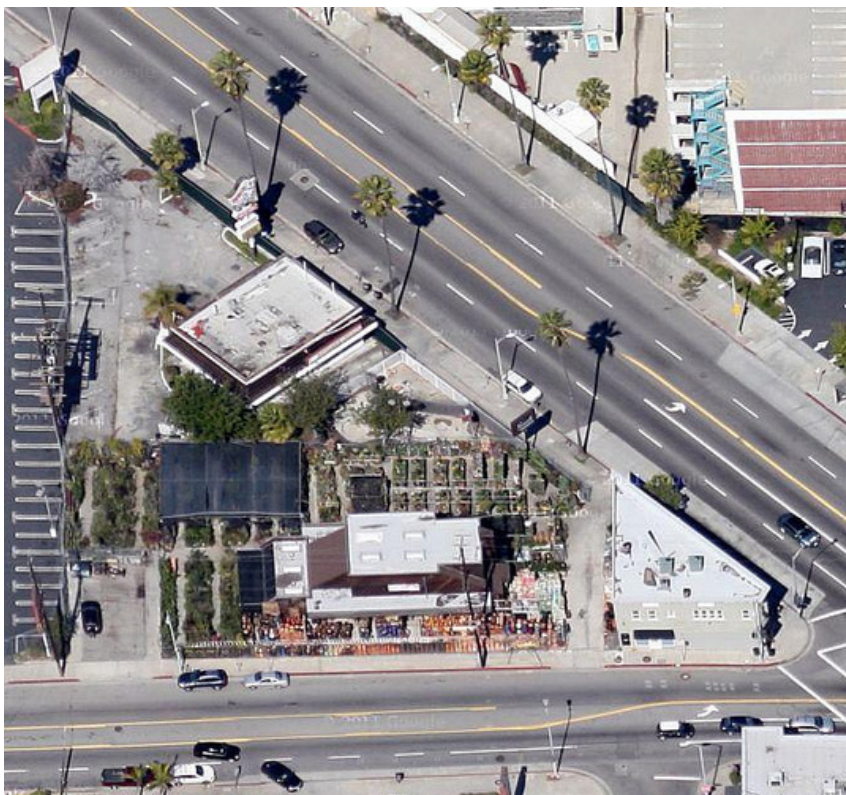
The bulk of research for this typology came from the Los Angeles Neighborhood Land Trust's "A Guide to Community Gardens." Published on the organization's website, this document is a comprehensive, up-to-date list of most community gardens in the county. Additional inventory resources included the American Community Garden Association's website and the website www.greentowns.com. Because Community Gardens are primarily volunteer-led sites, it was important to verify whether each garden was currently active. Researchers called or emailed the listed contacts for each garden for affirmation that they were still active. For non-responsive contacts, researchers searched for a website or social network page that might identify the Community Garden. If any announcements, reviews, or check-ins were posted within the previous two months, researchers considered the garden active. A few additional gardens were discovered via social network links from the community gardens that were verified using this method.



Aerial Scan of Organic Farm in Malibu
Source: Google Maps

Farms

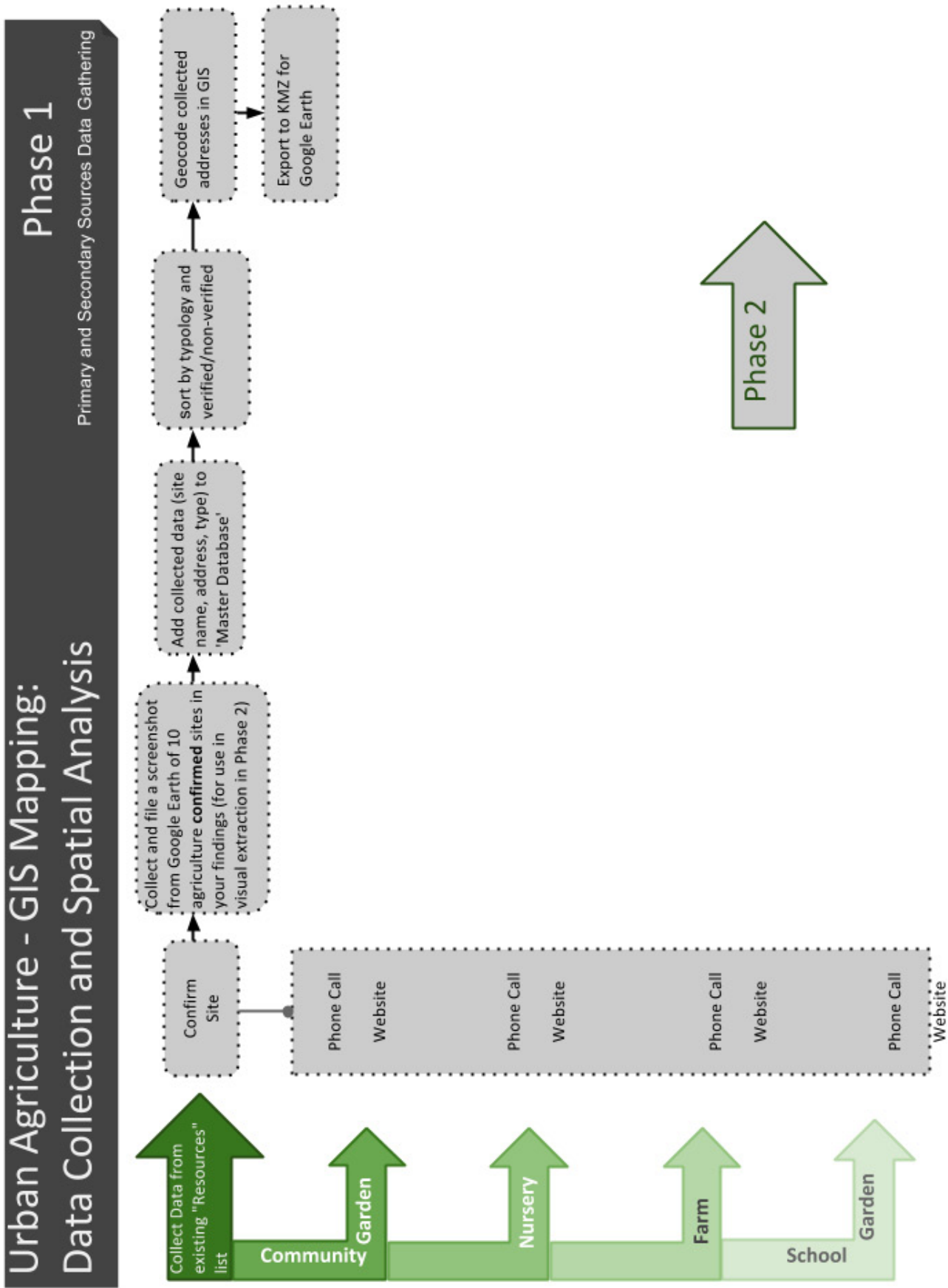
The team found 1,500 items from more than ten online inventories and the “LA Certified Producers” list provided by UCCE-LA. From the initial farms lists, 1,050 had contact information. Researchers secured responses from approximately 600 owners, with 178 affirming that a farm existed at the address shown in the inventories. Other respondents stated that their farms were no longer active or failed to provide the physical addresses of their farms. For the locations that were unverifiable by phone, the team checked their websites (if available) and the 2011 Los Angeles Region Imagery Acquisition Consortium aerial imagery data. Over 90% of these addresses had other land use designations on site.

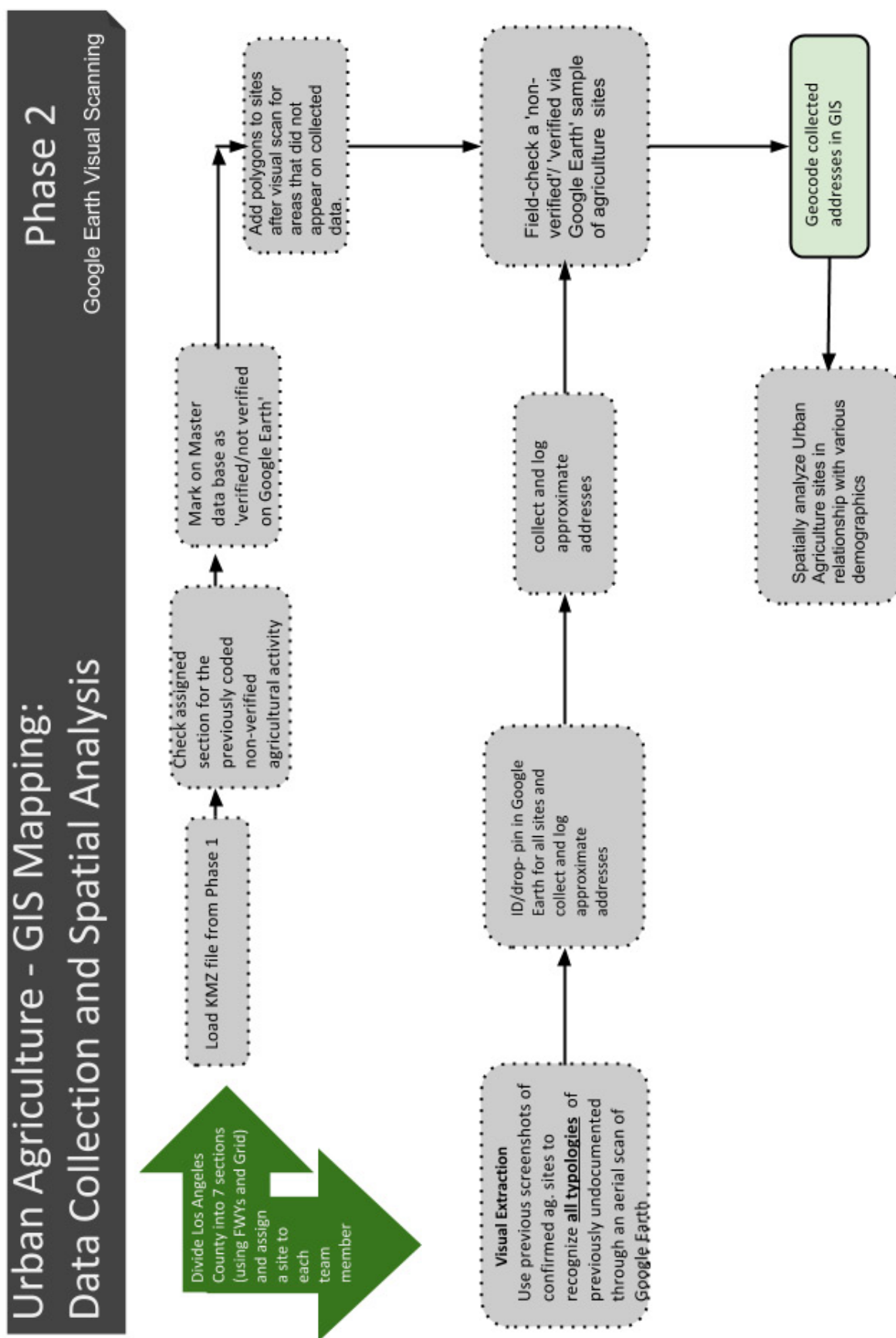


Aerial Scan of Nursery
Source: Google Maps

Nurseries

Researchers used the California Department of Food and Agriculture Directory of Licensed Nurseries as an inventory resource. Researchers contacted each nursery in the database to verify locations and operating status. If a nursery’s phone number was not provided, researchers conducted an Internet search for more information. In some cases, nurseries hosted websites which provided phone numbers and addresses. If a nursery could not be reached by phone, researchers scanned the listed address using Google Earth and confirmed the site by aerial view. If neither a phone call nor aerial scanning confirmed a site, the nursery was not included in the team’s final inventory.





For every geocoded site, the name, type, address, database source, and verification method were documented.

Data gathered for each of the four typologies was compiled into a spreadsheet. The addresses were converted into a uniform format compatible with Esri ArcGIS and geocoded onto a GIS map of Los Angeles County. On the map, the geocoded sites were converted into point features with actual geographic locations. During this step, the team performed a cross-reference check and removed double-counted points that resulted from overlapping data produced by searching for the varying, but similar, typologies within the commercial category.

In order to ensure data compatibility and consistency, the group established a data structure framework. For every geocoded site, the name, type, address, database source, and verification method were documented. A unique five-digit identity code was also assigned for each site, allowing the researchers to better archive and query data during analysis.

After geocoding all of the sites, the point shapefiles were exported to KMZ files, which are supported by Google Earth. After converting the shapefiles to KMZ files, the team used a technique similar to that employed by the Chicago researchers, using Google Earth to zoom in closely (with an eye altitude lower than 5,000 feet) to check whether the geocoded sites were close to any distinctive agricultural land use patterns. Since the orthogonal aerial imageries of Google Earth have comparatively low image quality and time consistency, oblique imagery from Google Maps and 2011 orthogonal aerial imageries from L.A. County were utilized when additional clarification was needed. If agricultural land use patterns were found near the points, the “add polygon” tool was utilized to delineate their boundaries.

Finally, the mapping research team endeavored to map urban agriculture sites omitted by the initial data collection phase. Screenshots from Google Earth were taken from a sample of ten confirmed agricultural sites in the findings. This visual extraction was then utilized to compare and identify agricultural sites through manual visual scans of Google Earth. Researchers visually scanned vertically,

one census tract at a time. Just as in the visual verification phase, researchers drew polygons to record the locations, sizes, and shapes of urban agriculture sites and produced KMZ files of the data collected. The areas covered include all census tracts located in urbanized areas of Los Angeles County.

SPATIAL ANALYSES

Spatial Analysis #1

After all urban agriculture sites were geocoded, researchers conducted a spatial analysis to determine where the greatest concentration of sites was found. Researchers used jurisdictional boundaries within the County, which include both incorporated cities and unincorporated census designated places (CDPs). In total, there were 141 jurisdictions, comprising urban Los Angeles County. Data for each typology was separated into its corresponding jurisdiction, and jurisdictions were given an “index” for each type. The index represented the number of sites per square mile, which the researchers called “agriculture density.” The larger the index number, the higher the agriculture density.

Spatial Analysis #2

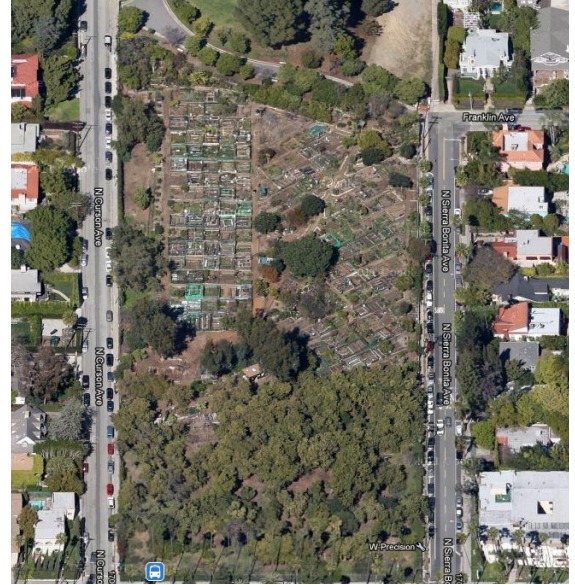
The research team compared three variables—population density, median household income, and race/ethnicity—to agricultural density at the jurisdictional level. Demographic trends were analyzed, and correlations (or lack thereof) between the scale of urban agriculture and demographics were observed.

LIMITATIONS

A major barrier to creating an accurate inventory is the ephemeral nature of urban agriculture. This research is up to date as of June 3, 2013 and will become outdated as new agricultural sites develop. Therefore, a major limitation facing the validity of this project is whether or not the study’s final database is regularly maintained and updated. Through aerial scans, the mapping research team



Wattles Farm Community Garden
Photograph by Erik Johnson, Hollywood, Los Angeles, CA



Aerial view of Wattles Farm Community Garden
Source: Google Maps

Contacting each public school in Los Angeles County required well over 1,000 phone calls.

Many community gardens have an especially transitory status because they are subject to sporadic vacancy of land, funding, and active volunteerism.

discovered 513 additional agricultural sites that were undocumented in the inventory databases, but which could not be included in this report's analysis because researchers could not accurately identify either their typology or address.

Urban agriculture takes many forms in Los Angeles County, and in order to establish an organized, legible dataset, the mapping research team categorized the data into four typologies. School gardens and community gardens were straightforward and easy to categorize. Farms and nurseries were slightly less straightforward, often overlapping, and may encompass additional agricultural activities. Orchards were defined as nurseries, and vineyards were defined as farms. While not completely intuitive, these categorizations allowed for an efficient means to separate the data into four typologies.

Each typology faced additional challenges regarding data collection:

School Gardens

Contacting each public school in Los Angeles County required well over 1,000 phone calls. Each school was called once, during hours of operation, during an initial first

run-through of the list. Some schools were unresponsive after several additional attempts to contact them (even during different hours and days of the week), and could not be included. Some of these unresponsive schools likely have gardens on-site, but due to the time-sensitive nature of the research project, the team decided to finalize the list to include only those sections that could be 100% verified.

Community Gardens

Many community gardens have an especially transitory status because they are subject to sporadic vacancy of land, funding, and active volunteerism. Google Maps was not a wholly reliable tool for identifying or verifying gardens because the satellite imagery at various locations was liable to have been captured either before new gardens were implemented or before old gardens were dismantled. This necessitated verification of all gardens by phone or email. Another major limitation was identifying informal or “guerilla” gardens not documented on any list or network. These could be ad-hoc collaborations between neighbors which might or might now be legally permitted. Guerrilla gardens, because they tend to be relatively small in size, are very difficult to find through aerial scans.

Nurseries and farms have very similar attributes, such as their size, scale, and production outputs, making it difficult to distinguish between the two.

The verification process for nursery and farm sites revealed that many agriculture business owners choose to establish their businesses in urban locations while the actual growing sites are located in more rural areas.

Nurseries

Both retail and wholesale nurseries exist within Los Angeles County's boundaries. It was difficult to discern whether some nurseries were wholesale or retail oriented. Due to the inability to identify what kind of seller each nursery was, this information was not specified within this report. Nurseries and farms have very similar attributes, such as their size, scale, and production outputs, making it difficult to distinguish between the two when conducting aerial scanning. To avoid this limitation, researchers scanned areas on Google Earth for signage identifying the nature of agriculture sites. For example, a large agricultural site might have a visible street view sign reading, "Green Trees Plant Nursery." If the typology was identifiable, it was added to the inventory.

Farms

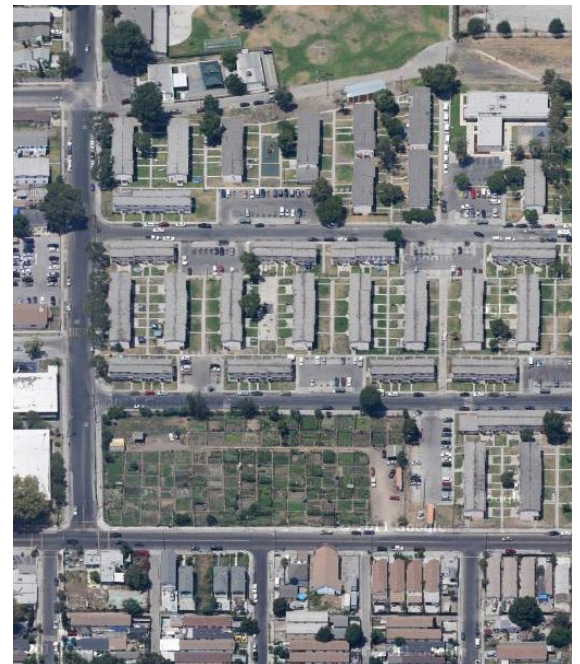
Most of the farms and vineyards were unresponsive to the initial contact, and some had incorrect contact information within the lists and inventories. By contacting unresponsive farms on different workdays and times, researchers were able to reach a few more sites; yet not all were available. Similar to the process for verifying school garden locations, the team finalized the list with only sites that were verified.

The verification process for nursery and farm sites revealed that many agriculture business owners choose to establish their businesses in urban locations while the actual growing sites are located in more rural areas or even outside of the county. Many Los Angeles-based wineries, nurseries, and farms have actual growing sites in the Northern California region while their businesses are listed within Los Angeles County. Due to the difficulty of distinguishing business locations from actual growing sites, a second verification was conducted through aerial scans for farms and nurseries. Nonetheless, such agriculture sites are included in the analysis and on the comprehensive interactive map. In order to identify errors in the data, the interactive website includes a tab where the public can report a

problem with a listing. After verifying an erroneous listing, the research team (or future hosts of the website) can remove or change the listing to reflect the correct information. Continuously updating the interactive map with the help of community members will increase the accuracy of urban agriculture activity sites in the county.

When verifying the different typologies through telephone calls, researchers identified another limitation: it is possible that those receiving calls might have skewed their responses for a variety of reasons; time of day, environment at work, mood, etc. Lack of interest or reluctance to answer additional questions could have initiated responses to limit further questioning.

Finally, the research team was not able to find a reliable database or inventory of vineyards and farms in Los Angeles County. Inventories found were scattered throughout different websites, such as those for niche product and trade associations. Researchers found that some of the resources available had not been updated recently and proved to be unreliable upon verification.



Community Garden in Florence-Graham
Source: Google Maps

The research team analyzed which jurisdictions had the greatest concentration of agricultural activities per square mile, or the most “agricultural density.”

FINDINGS

The research team identified and mapped a total of 1,261 verified urban agriculture sites in Los Angeles County. At the time of publication (June, 2013), the county contains at least:

- 761 active school gardens
- 118 community gardens
- 171 farms
- 211 nurseries

ANALYSIS

Los Angeles County is a vast area inhabited by nearly ten million people, comprising 141 cities and CDPs. Each jurisdiction features different demographics and land use patterns, potentially influencing the scale of urban agriculture within the boundaries. Researchers focused on the correlation between urban agriculture and three demographic variables: median income, population density, and ethnicity. The relationship (or lack thereof) between these variables and the abundance of

urban agriculture activities in a given jurisdiction does not imply causality, but simply displays a snapshot of the county.

The maps included later in this report and the appendix on pages represent the distribution of urban agriculture in cities and census-designated places in the county. Together, cities and census designated places are referred as “populated places,” while extremely rural mountain and desert areas are coded differently.

Agricultural Density Index

The research team analyzed which jurisdictions had the greatest concentration of agricultural activities per square mile, or the highest “agricultural density.” The following tables show the top five cities for each typology according to their “agricultural density.” The index at the far right of the table indicates how prevalent the specific agricultural activity is, relevant to the size of the jurisdiction. Jurisdictions include both cities and CDPs, which are noted with an asterisk.

As of June, 2013 there are currently . . .

761 SCHOOL GARDENS

118 COMMUNITY GARDENS

171 FARMS

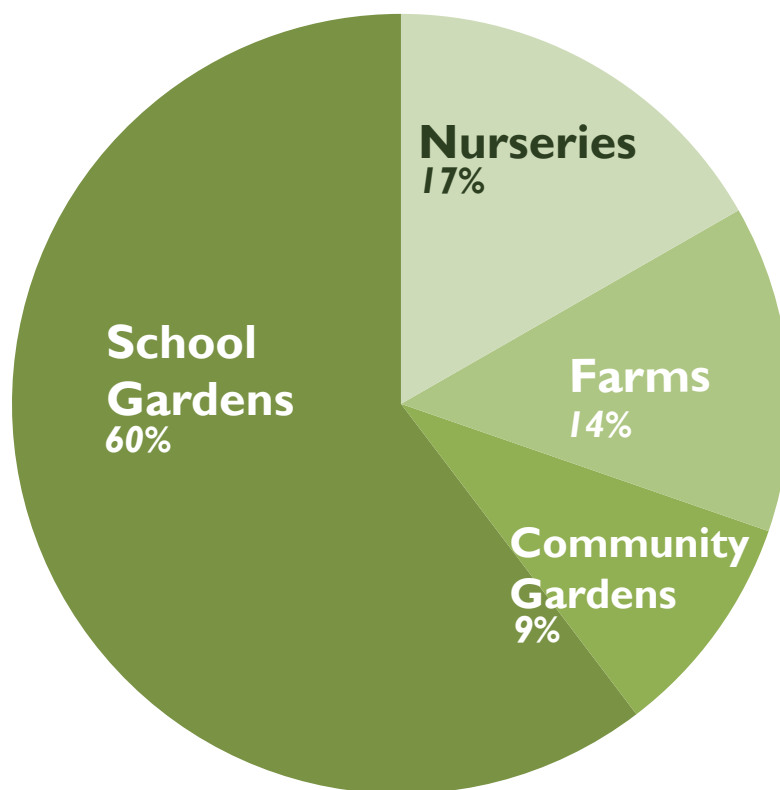
211 NURSERIES

in Los Angeles County, a total of

1,261 VERIFIED

URBAN

AGRICULTURE SITES



City/CDP	Total Community Gardens	Community Garden Index
Hermosa Beach	1	0.7
West Hollywood	1	0.53
Lawndale	1	0.51
Long Beach	19	0.37
Santa Monica	3	0.36

City/CDP	Total School Gardens	School Garden Index
Alondra Park*	3	2.26
Florence-Graham*	8	2.23
Hawaiian Gardens	2	2.09
Lawndale	4	2.03
Huntington Park	6	1.99

City/CDP	Total Nurseries	Nursery Index
East Pasadena*	2	1.51
Gardena	7	1.19
Rosemead	5	0.97
West Carson	2	0.88
Florence-Graham*	3	0.84

City/CDP	Total Farms	Farm Index
South San Jose Hills*	2	1.51
Little Rock*	7	1.19
Westmont*	5	0.97
Quartz Hill*	2	0.88
East Pasadena	3	0.84

High Prevalence of Community Gardens

Jurisdictions with small populations have high indices by virtue of having one community garden within their boundaries. The City of Long Beach contains 19 community gardens, about one sixth of the total amount in the county. All cities in the top five are incorporated.

High Prevalence of School Gardens

The top five jurisdictions for school garden indices share one notable feature: All are located in southern Los Angeles County. The top two jurisdictions, Alondra Park and Florence-Graham, are both CDPs.

High Prevalence of Nurseries

The top five jurisdictions for nurseries are located in southern Los Angeles County or the San Gabriel Valley in eastern Los Angeles County. The City of Gardena appears to be a nursery hot spot, with a total of seven nurseries within the city limits. Florence-Graham appears on two top five agricultural site lists, indicating a strong agricultural presence in the community.

High Prevalence of Farms

The first noticeable feature about the top five jurisdictions for farms is that all five are CDPs. Quartz Hill and Little Rock are located in the Antelope Valley, where the population density is lower and open space is abundant. All five jurisdictions have low populations, with Westmont featuring the largest of 30,915. Again, jurisdictions with small populations and just one or two activity sites have skewed index scores.

* Community Designated Place

City/CDP	Total Agricultural Sites	Total Agriculture Index
Florence-Graham	12	3.35
South San Jose Hills*	5	3.32
Lawndale	6	3.04
Hermosa Beach	4	2.80
East Los Angeles*	20	2.68
Alondra Park	3	2.62
Gardena	14	2.39
East Pasadena*	3	2.27
West Puente Valley	4	2.27
Redondo Beach	14	2.25

Highest Overall Agricultural Density

The table at left shows the top ten jurisdictions for total agriculture density. Florence-Graham, with twelve total sites, has the highest index at 3.35. Half of the top ten jurisdictions are cities and half are CDPs. As shown in the table, East Los Angeles, with twenty agriculture sites, has the most among the top ten.

City/CDP	Total Agricultural Sites	Total Agriculture Index
Florence-Graham*	12	3.35
Lawndale	6	3.04
East Los Angeles*	20	2.68
Gardena	14	2.39
Redondo Beach	14	2.25
Lakewood	19	2.01
Huntington Park	6	1.99
Culver City	9	1.75
Torrance	34	1.65
Manhattan Beach	6	1.52

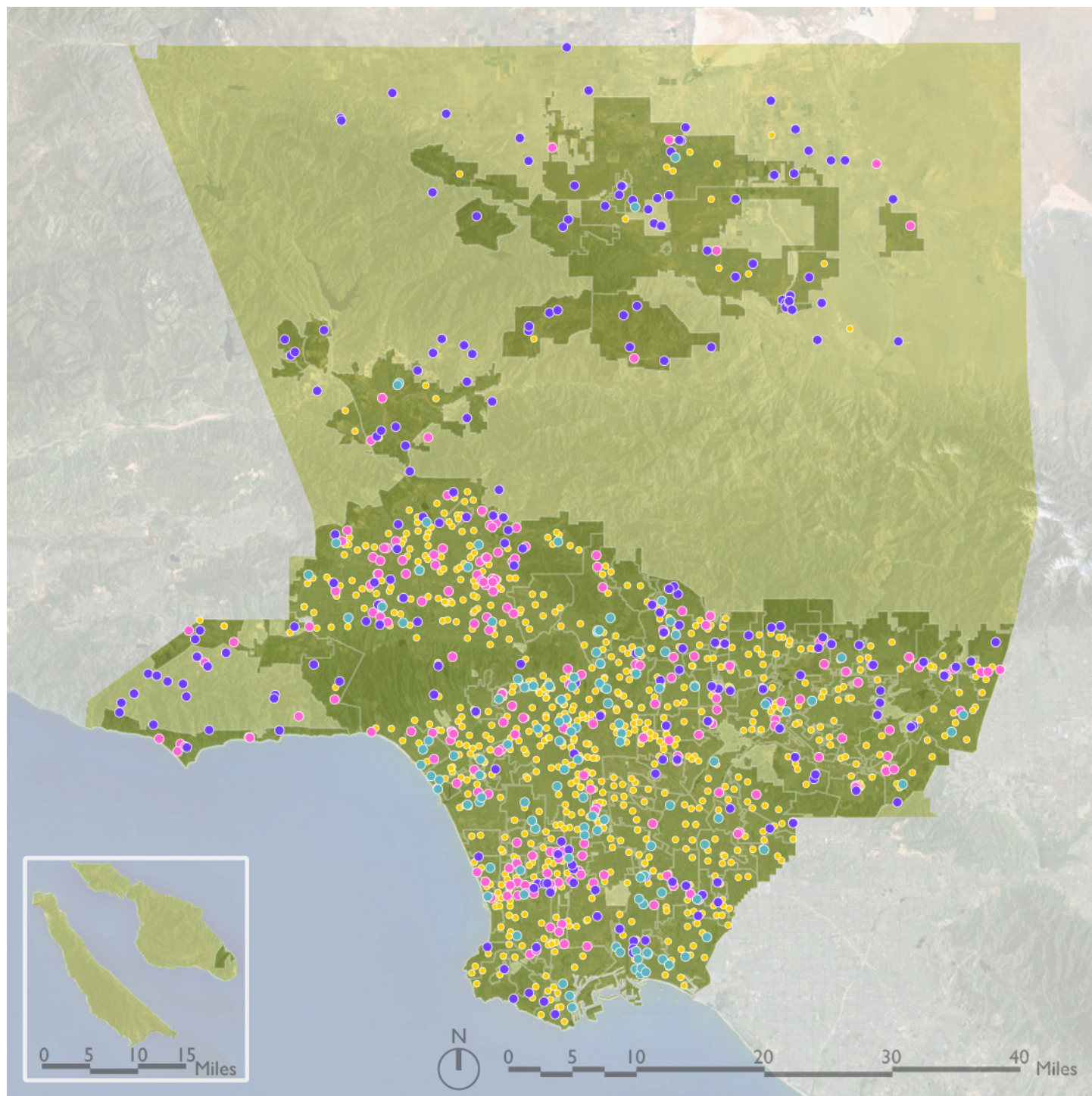
Highest Overall Agricultural Density for Jurisdictions with Populations Over 30,000

Smaller jurisdictions can obtain a higher index more easily than larger ones, with one site often contributing to the highest index of all jurisdictions in the county. It is therefore more significant when larger jurisdictions have high indices, as this indicates a real pattern of agricultural activity. The list at left filters out jurisdictions with fewer than 30,000 residents to obtain a new top ten list.

By filtering the smaller jurisdictions, this top ten list displays jurisdictions with a substantial amount of urban agriculture. Florence-Graham is still at the top, making it the agriculture “hotspot” of this study.

* Community Designated Place

URBAN AGRICULTURE LOCATIONS IN LOS ANGELES COUNTY

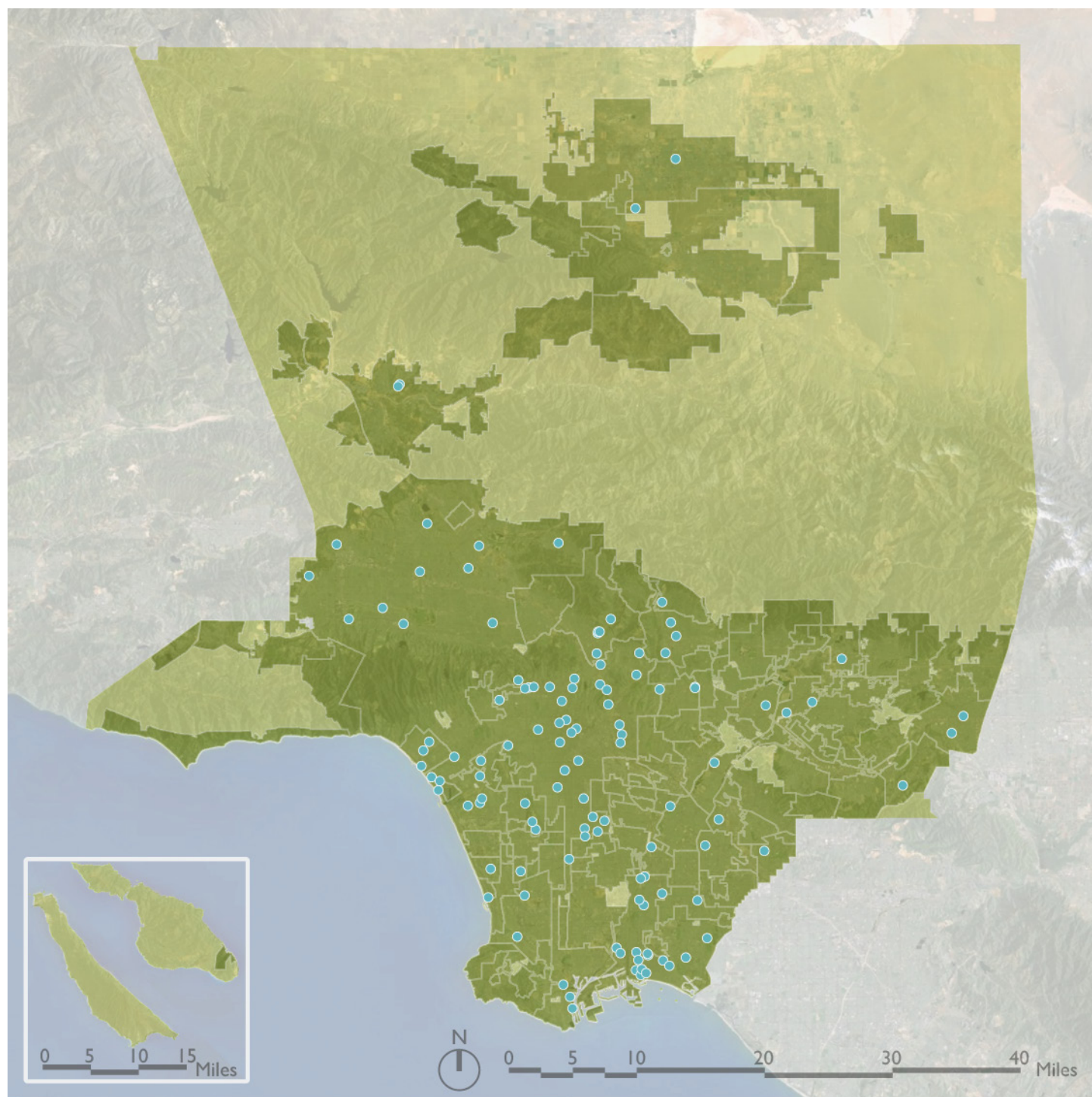


LEGEND

- | | |
|-------------------------|------------------|
| Urban Agriculture Sites | Populated Places |
| Community Garden | Other Areas |
| Farm | |
| Nursery | |
| School Garden | |

Base map source: ESRI; data collected by researchers—see Mapping Urban Agriculture Appendix for detailed sources.

COMMUNITY GARDEN LOCATIONS IN LOS ANGELES COUNTY

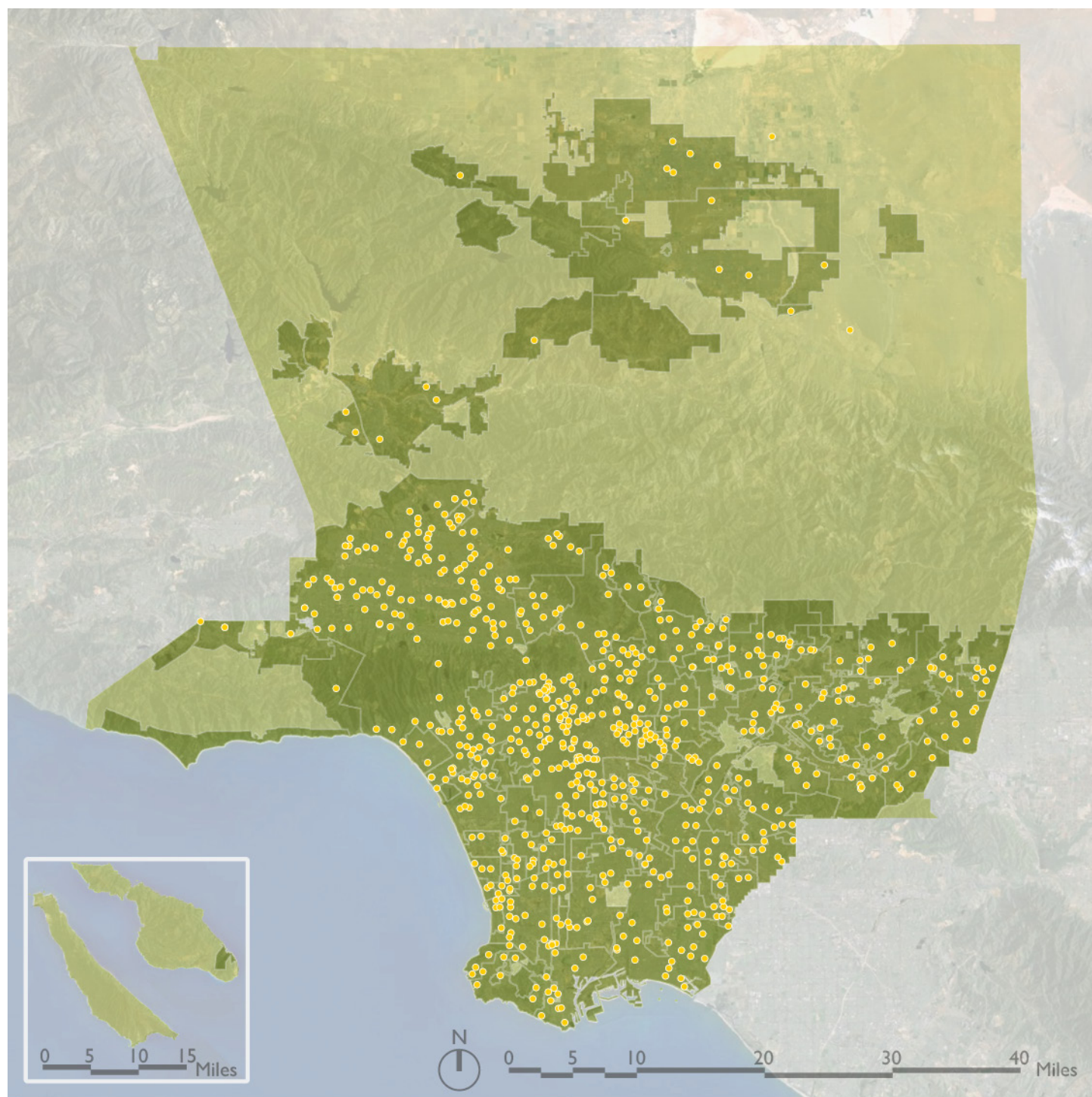


LEGEND

- Community Garden
- Populated Places
- Other Areas

Base map source: ESRI; data collected by researchers—see *Mapping Urban Agriculture Appendix* for detailed sources.

SCHOOL GARDEN LOCATIONS IN LOS ANGELES COUNTY

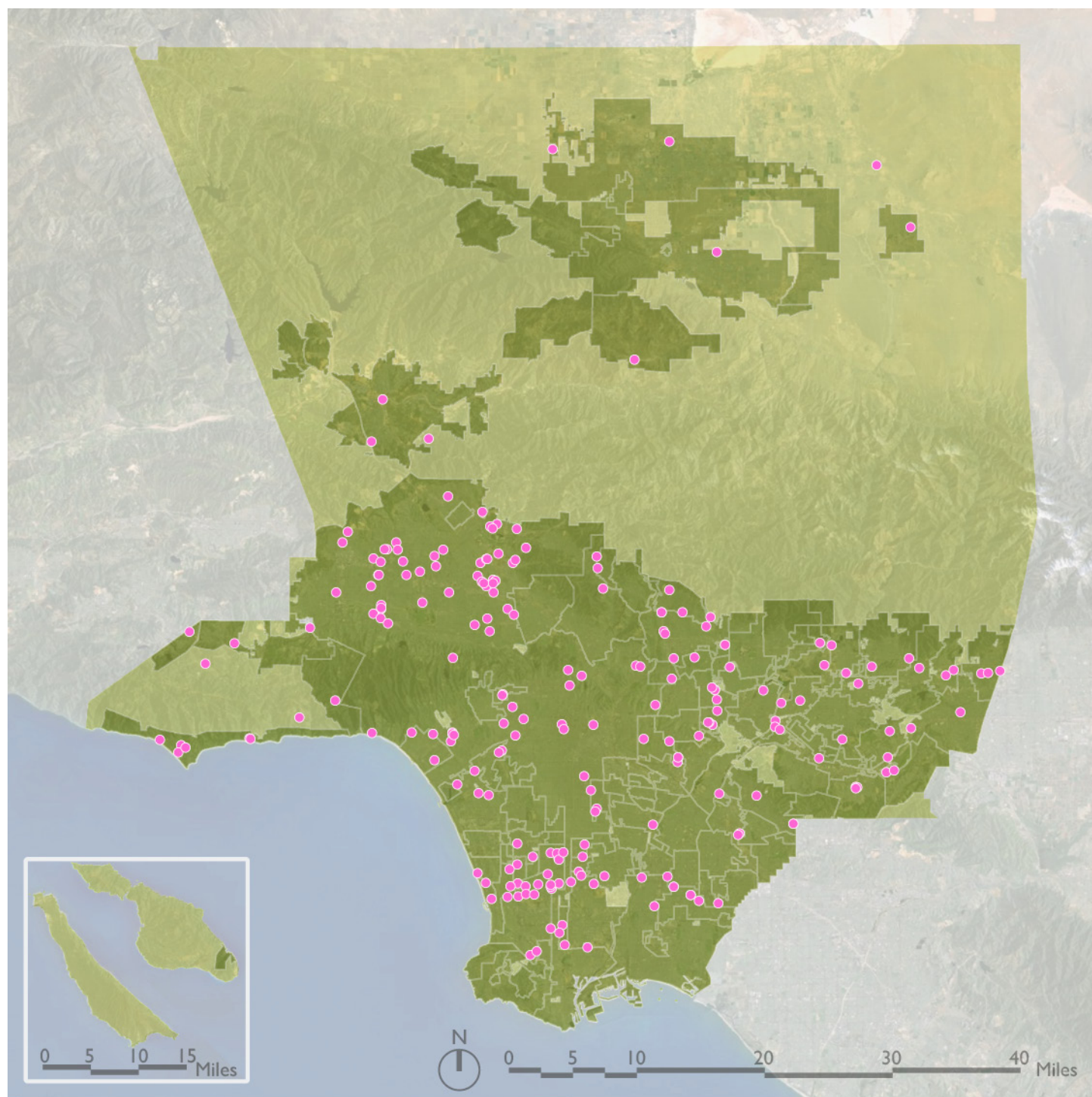


LEGEND

- School Garden
- Populated Places
- Other Areas

Base map source: ESRI; data collected by researchers—see *Mapping Urban Agriculture Appendix* for detailed sources.

NURSERY LOCATIONS IN LOS ANGELES COUNTY

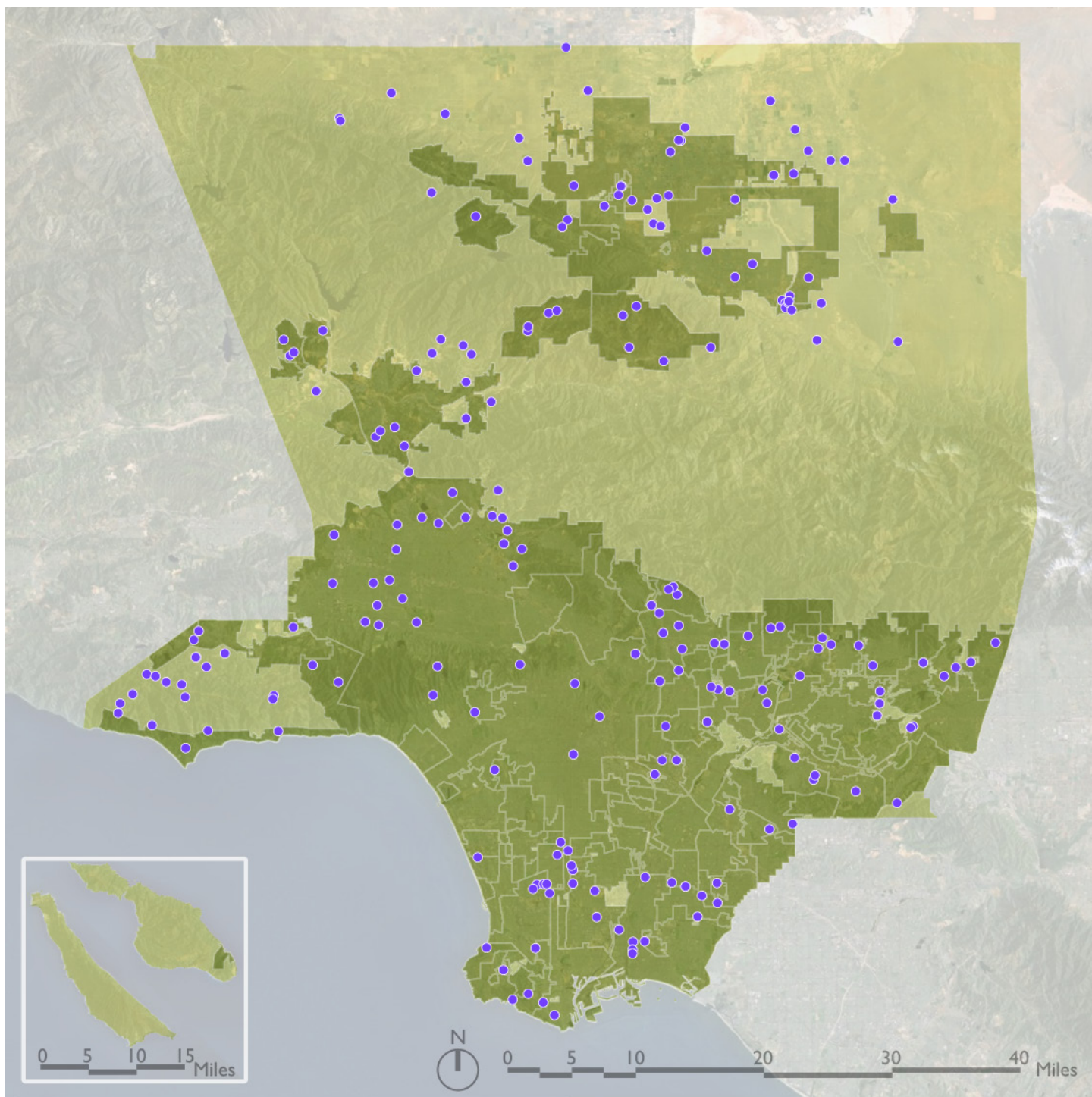


LEGEND

- Nursery
- Populated Places
- Other Areas

Base map source: ESRI; data collected by researchers—see Mapping Urban Agriculture Appendix for detailed sources.

FARM LOCATIONS IN LOS ANGELES COUNTY



LEGEND

- Farm
- Populated Places
- Other Areas

Base map source: ESRI; data collected by researchers—see Mapping Urban Agriculture Appendix for detailed sources.

There is a positive correlation between total agricultural activity within a jurisdiction and population density.

There is no discernible relationship between urban agriculture and median household income.

There is no discernible trend between density of urban agriculture sites and ethnicity.

Trends

Agriculture and Population Density

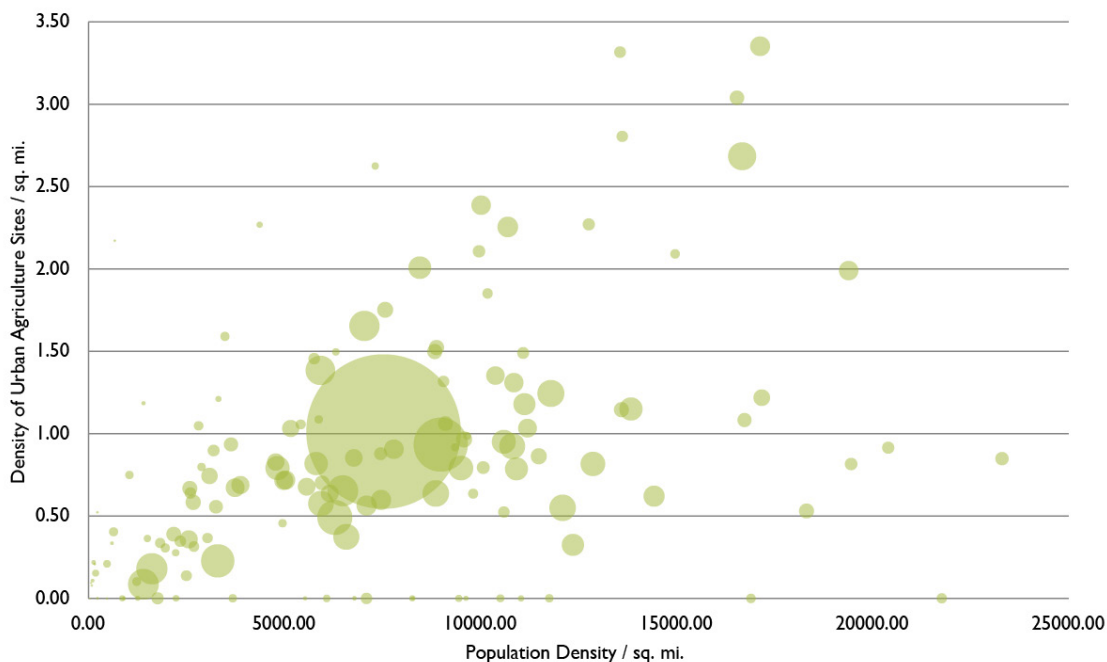
There is a positive correlation between total agricultural activity within a jurisdiction and population density. While this may seem counter intuitive, school gardens account for about 60% of total agriculture sites uncovered in this research. Cities with a dense urban fabric have a greater concentration of schools, meaning they are more likely to have a high rate of school gardens relative to size.

Community gardens are also more highly concentrated in dense locations. One reason

is perhaps due to the lack of private backyard agriculture, which could necessitate a shared gardening space. School and community gardens are the two public agriculture typologies in this study, and the fact that both feature positive correlations between number of locations and population density is noteworthy.

While there is no positive correlation between commercial agriculture sites (farms and nurseries), there is no negative correlation either, suggesting these historically rural agricultural activities are occurring in dense urban environments as well as those that are sparsely populated.

AGRICULTURE AND POPULATION DENSITY



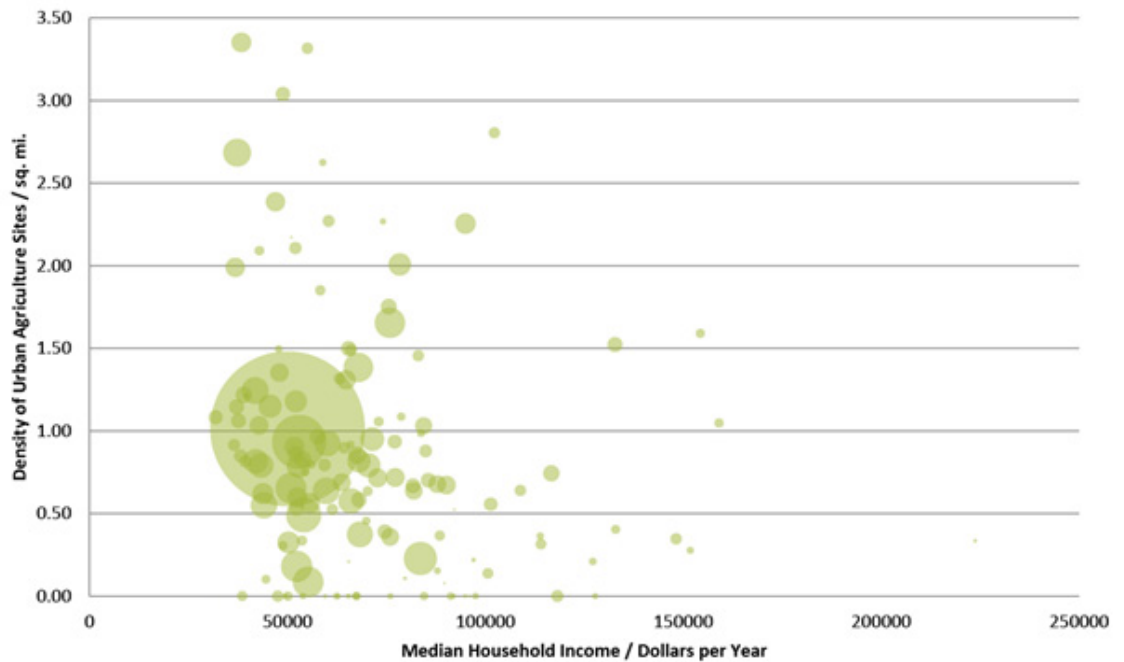
Income

There is no discernible relationship between urban agriculture and median household income according to this research. For all four typologies, there is no definitive correlation. However, the highest densities of all four typologies of agriculture take place in cities where the median income is around \$50,000 per year. (See appendix for chart.)

Race/Ethnicity

The data show that there is no discernible trend between density of urban agriculture sites and ethnicity. However, one notable outlier is that the few small cities and CDPs with white populations of 70% or more have some of the highest densities of urban agriculture. (See appendix for chart.)

AGRICULTURE AND MEDIAN INCOME



RECOMMENDATIONS AND FUTURE RESEARCH

While the mapping research team has been thorough in the development of an extensive database of urban agriculture in Los Angeles County, the findings in this report are incomplete. One of the main goals of the research was to establish a baseline dataset which public officials, researchers and the general public could use to develop and answer questions about relationships between urban agriculture and an array of spatially relevant demographics. Questions of air pollution impacts or toxins in soils, or the possible relationship between local agriculture and obesity are all key research topics that have yet to be analyzed. The following potential research may be conducted with data from this project:

- Further investigate possible correlations between income/race/ethnicity/foreign-born populations and the varying types of urban agriculture discussed in this report.

- Research the correlations and consequences of agriculture in an urban setting including issues such as pollution, toxins, pesticides or impacts of agricultural runoff. Define through spatial analysis the proximity of urban agriculture to polluting urban infrastructure such as highways and heavy industry.
- Building on the findings and maps presented in the preceding chapter, overlay existing zoning data on top of agricultural activity site data. Research and discuss correlations between the prevalence of urban agriculture and municipal regulations.
- Analyze food access and obesity with respect to urban agriculture and low-income populations.
- Explore the development of food networks and synergies among typologies that tap into local urban agriculture for food production.
- Study the relationship between the numbers of and locations of grocery stores and urban agriculture.

Questions of air pollution impacts or toxins in soils, or the possible relationship between agriculture and obesity are all key research topics that have yet to be analyzed.

The high rate of undocumented sites demonstrates the current lack of publicly available information about agricultural locations of different typologies in Los Angeles County.

Future research may also focus on the 513 agricultural sites discovered through aerial visual scans on Google Earth which were not included in this analysis because they could not be identified. This high rate of undocumented sites demonstrates the current lack of publicly available information about agricultural locations of different typologies in Los Angeles County. The team strongly encourages future researchers to delve into the identification and verification of currently undocumented sites in order to deepen the understanding of the region's capacity for urban agriculture.

As discussed previously in this chapter, the general difficulty in collecting these data is in the ephemeral nature of agricultural sites. Regular maintenance of this database will be important with respect to the data collected, but also as a tool for fashioning relationships with schools, growers, and businesses. Current and comprehensive agricultural databases must be maintained for accurately evaluating the state of urban agriculture activity in the county.

Below are additional recommendations for in-depth analysis which may result from further work with data collected for this research:

- Enhance the database with additional information and measurements that quantify and track the amount of land used for each typology to make the comparison with land use regulations.
- Include the total number of individual plots in each community garden and in each city to make more in depth comparisons between jurisdictions.
- Further research and quantify agricultural sites under electric power lines.
- Increase the capacity and commitment of regulatory agencies and technical assistance providers to track, manage, and monitor urban agriculture land uses in their jurisdictions.
- Employ interactive web-based databases such as this report's mapping

of urban agriculture to inform policy development and help set priorities and access criteria for residents to access community gardens. Use similar methods to affect the distribution of parks and recreation amenities in General Plan elements.

Finally, the general processes and methodologies outlined in this report (used by both this report's researchers and those in the Chicago case study cited in the Literature Review) serve to establish a baseline system which other municipalities and regions may adapt to compile data about the current state of agriculture elsewhere in the United States.

CONCLUSION

The Mapping team created a comprehensive inventory of active urban agriculture sites in Los Angeles County as of June, 2013. Over the course of four months, the researchers compiled data and classified each agricultural site into four typologies: school gardens, community gardens, nurseries, and farms. The database presented in this section of the report is intended to assist planners, policymakers, and the public in understanding the extent of urban agriculture in their jurisdictions and neighborhoods.

Los Angeles County is a vast, sprawling region of over ten million residents, and it is unrealistic to assume this report has captured all urban agricultural activity within this region. Additionally, urban agriculture is constantly in flux, and the locations presented in this section may not be accurate several months from the date of the report. Therefore, this project is ideally suited to be a starting point for the tracking of urban agricultural activity in L.A. County. The interactive map, located at <http://celosangeles.ucdavis.edu/>, can be updated and monitored to ensure urban agricultural activity in Los Angeles is accurately assessed. The research team looks forward to future collaboration with all those involved in urban agriculture in Los Angeles County.

THE ECONOMICS AND GEOGRAPHY OF THE ALTADENA FARMERS' MARKET

Hotspot or Not?

Black Cherry
Tomato

Rich, smoky black
flavor in a cherry!

3" Veggies and Herbs
300 each
or
4 for 1000

Herbs!

BRONZE FENNEL

A gorgeous bass note
for your herb garden!

Cinnamon Basil

delicious, hearty
add to your
herb garden!

Italian
BASIL

• Italian Seedstock

How does
urban agriculture
fit into the greater
economy of
Los Angeles?

Today's global trade of agricultural products has created a highly-mechanized, input-intensive food system whose interconnectivity crosses the world. The movement of food in large quantities has shaped how rural agricultural communities do business; in some urban areas, small organic farms are providing an alternate way to grow and distribute food. Based on a case study of the Altadena Farmers' Market, this researcher examines how urban agriculture fits into the greater Los Angeles economy.

INTRODUCTION

Urban agriculture as a contemporary movement in the United States may be characterized as a reaction to structural changes in the worldwide food industry. Changes to how an industry functions are a reaction to the constant capitalistic pressure to do more with less: the pressure to continuously increase efficiency. Within the context of the food industry, increasing efficiency is sought after by trading agricultural goods between countries—the forces of globalization—and by incorporating new inventions into business models—the forces of technology. Global trade allows countries to concentrate policies on growing specific crops to export while new innovations can increase yields of certain crops through mechanization, genetic engineering, and the use of fossil fuels (as inputs into growing food, to run farm equipment,

and to transport food). These developments have contributed to today's system of industrial agriculture. While striving to increase efficiency is desirable in an economic sense, in reality one can see both positive and negative impacts for populations around the world. This chapter's literature review includes a definition and history of industrial agriculture, as well as a discussion of its consequences.

Most food today is produced through the industrial agriculture model, but an increasing number of consumers, retailers, and producers are actively working to source food through different models of production. These stakeholders are attempting to create a food system that includes, among other things, local production and consumption. In large metropolitan areas like Los Angeles County, this includes growing food in urban settings and distributing goods at farmers markets. Because farmers markets are a part of the alternative food system model, a case study of

Cover photograph
by Kelly Rytel, Spade
and Seed Booth at
the Altadena Farmers'
Market, Altadena, CA

Research Question: How does urban agriculture fit into the greater economy of Los Angeles?

Master Gardeners Program - An educational program of intensive horticultural training, often sponsored by local universities and university cooperative extension programs, e.g. the University of California Cooperative Extension.

New Economic Geography (NEG) - A heterodox economic theory which explains the presence of agglomeration economies.

Fresh Food - Food that is grown and sold with little or no processing.

Artisanal Food - Food products that are processed to create a crafted, edible good.

a market is an effective entry point into an examination of the economics and geography of urban agriculture.

Farmers markets shape the economics of urban agriculture, as well as how the businesses of the industry function, because they are frequently the distribution point for urban agriculturists. When vendors come together in one place to sell their goods, farmers markets become a meeting place of people and ideas. The movement of ideas between farmers and feedback from customers to farmers impacts how business is done. An additional element of farmers markets includes the interaction between customers, which creates a lively event that has become an integral element of many communities. For this reason, urban planners are increasingly involved in the creation of farmers markets. Because they are often a weekly public event, other community values are on regular display and can include showcasing non-profits, selling non-food items, offering events for children like petting zoos, offering events for adults like cooking demonstrations and informative lectures, and hosting *Master Gardeners Program* classes. Given these attributes, farmers markets are a natural center for the ongoing support and development of urban agriculture.

Farmers markets can also inform the geography of the food industry because vendors grow and produce food in different locations. The traditional advantages of growing food in a rural setting include lower costs of land and water. Thus, as farmers and food producers choose to locate in a city, how do their business models differ from the industrial model of agriculture? In order to analyze how urban agriculturists function in today's economy, this researcher studied businesses that sold either *fresh food* or *artisanal food* in an urban setting. This researcher found that the Altadena Farmers' Market (AFM) is actively promoting urban agriculturists, labeled "(sub)urban farmers" at the market, and could therefore serve as the basis for studying the industry of urban agriculture in Los Angeles.

RESEARCH

LITERATURE REVIEW

The research question developed in this chapter is concise: "How does urban agriculture fit into the greater economy of Los Angeles?"

In order to analyze how urban agriculture is grown, produced, and distributed, this researcher chose to conduct a case study of the Altadena Farmers' Market (AFM). The AFM consists of a mix of urban and rural farmers and artisanal food producers. The goal of this research was to determine how and where these vendors do business in order to understand how urban agriculture fits into the wider regional economy of greater Los Angeles. It should be noted that this analysis excludes vendors of prepared food which is consumed on-site.

This research utilizes the economic theories of the *New Economic Geography* (NEG) to interpret the history of the food industry and the role urban agriculture plays within the greater Los Angeles economy. In later sections, these theories will be applied to inform the economic potential of urban agriculture. The following literature review first examines the basic concepts of NEG, then gives an overview of the evolution of the food industry, and finally summarizes the methodology used in this analysis.

Basics of the New Economic Geography

The pioneer contributor of NEG is Paul Krugman, a *New York Times* columnist who was awarded a Nobel Prize based on his theories of global trade. He describes the New Economic Geography as a branch of economics that uses a new set of modeling tools to describe behavior while importantly and simultaneously attempting to bring geography into "the economic mainstream" (Krugman, 1998, p.7). Yet, the theories of the New

NEG is particularly interested in why development occurs more rapidly in some places and not in others and specifically how economies of scale alter the economic development of places.

Economies of Scale - “when long-run average total cost declines as output increases” (Krugman and Wells, 2009).

Internal Economies of Scale - Achieved when individual firms achieve a lower cost per unit of a good by increasing production.

External Economies of Scale - Achieved when a collection of firms achieve lower costs per unit of goods because of the presence of other firms nearby.



Citrus at the Altadena Farmers' Market.
Photograph by Kelly Rytel, Altadena, Los Angeles, CA

Economic Geography are still considered heterodox. Without delving into the complex underpinnings of mainstream economic theory modeling taught in most major universities throughout the world, it is sufficient to say the NEG is particularly interested in why development occurs more rapidly in some places and not in others and specifically how *economies of scale* alter the economic development of places (Storper, 2013).

In general, the term *economies of scale* refers to situations where the cost per unit of making a good decreases as the total amount of output increases. As firms increase in size, efficiency increases. In general, these increases in efficiency are achieved as workers become more specialized in tasks and as the high cost of specialized equipment is spread over an increasing number of goods produced (Krugman and Wells, 2009). Two specific types of economies of scale can increase efficiency: *internal economies of scale* and *external economies of scale*.

Internal economies of scale come about when an individual firm attempts to increase productivity by increasing the size of their individual business and concentrating activities

in the same geographical place, or “under one roof”. A prominent example of this method of production is Los Angeles-based American Apparel. Within the company’s large warehouse, clothes are designed, cut, sewn, stitched, and marketed, before being sold in American Apparel stores (American Apparel, 2013). All parts of the process are developed and controlled within the same company. This type of scale is currently seen in most industrial agriculture models. Taking the example of a farmer growing corn, one can see that gains from being big are derived from two sources. First, due to the high cost of farm equipment, when more crops are grown the up-front capital costs can be spread over more units of output. This reduces the cost per ear of corn that is grown. Second, if a farmer concentrates on only growing corn, skills of each employee can be more specialized. Specialized labor increases productivity because employees spend less time transitioning between tasks. In the industrial model of agriculture, one singular crop is grown in a field—called a monoculture—instead of several crops growing together—called a polyculture. In the United States, this model of production in manufacturing industries created robust economic growth in the 1950s and 1960s (Moretti, 2012).

For certain industries, the advantages of agglomeration, or being close in space, increase productivity as a whole through shared input providers, a shared labor pool, and information spillovers (formally called learning).

Non-tradeable good - A good or service that is produced and consumed locally.

However, industries gaining advantages by scaling up and being big has given way to the industries which gain advantages by scaling up and being big due to external economies of scale.

External economies of scale increase productivity by being big in a different way. One of the best examples of firms that benefit from external economies of scale is the information technology industry found in Silicon Valley. Although the strict geographical boundaries can be debated, in general Silicon Valley is home to a concentrated amount of high-tech firms in the southern area of the San Francisco Bay region. This is a high-growth region with high wages, both of which are usually desirable elements in a regional economy. Understanding how the information technology industry functions can inform how other information-intensive industries do or do not function. Why do technology giants like Google and Apple, along with smaller technology companies, choose to locate in the same area, even though the cost of doing business, including rents, wages, and taxes, are high? Information technology firms co-locate because the advantages of agglomeration, or being close in space, increase productivity as a whole through shared input providers, a shared labor pool, and information spillovers (formally called learning). These benefits as a whole outweigh the costs. Economists of the New Economic Geography explain the clustering of firms and their increased productivity based on these three benefits (Duranton and Puga, 2004). Before delving into these three items in detail, two non-NEG theories should be discussed to help frame the argument that the New Economic Geography is making.

The NEG explains how a concentration of firms in one industry in a single place can give rise to increased productivity. However, urban theorists argue that productivity gains in an industry can also be attributed to the clustering of basic urban infrastructure that is available in urban areas versus rural areas, called urbanization economies. This is because cities themselves are an agglomeration: places where people and firms concentrate. However, given

the same number of households and firms, one can expect that a smaller city with higher density will have a lower nominal amount of infrastructure investment compared to a large city with lower density. Regardless of size, each city requires an initial infrastructure of sewer pipelines, electricity lines, roads, and public transportation. In smaller cities, these investments will be spread over a smaller area and therefore will be more efficient. According to the theory of urbanization, productivity gains come from concentrated infrastructure and common resources. According to NEG economists, productivity gains come from the sharing, matching, and learning of what they call localization economies. In reality, both of these types of agglomeration gains play into higher firm productivity rates in cities and mutually reinforce each other: as firms gain in productivity, wages go up, which increases the demand for goods and services in the area, which further increases urbanization rates and firm clustering.

Other theorists, including Edward Glaeser, believe that productivity gains in a region are underpinned by individual household choice. Glaeser emphasizes how individuals and households make decisions on where to live, which are based on wages, the quality of life within the area, and the price of housing; this inflow of people attracted to specific places drives the prosperity of those places. In this model, the decision-making and locations of firms play a secondary role because, in general, people follow jobs (Storper, 2011). Richard Florida also emphasizes the role individual choices have in shaping the growth of a city. Alternatively, NEG emphasizes how the decisions of firms affect the prosperity of an area. In this model, in general, people follow firms.

Before exploring the specific benefits of sharing inputs, labor matching, and learning, the NEG also informs us which industries can benefit from economies of scale and which cannot. Scale and bigness do not contribute to increased efficiency when the industry is producing a non-tradeable good.

Non-tradeable goods and services are produced and consumed locally. In the United

Tradeable good

- A good or service that that can be produced in one location and consumed elsewhere.

Labor Matching -

A New Economic Geography term referring to how co-located businesses within an industry use the same labor pool.

Input Sharing - A

New Economic Geography term referring to how co-located businesses within an industry share similar inputs and input providers.

States, this part of the economy makes up about 60% of the workforce and employs workers in diverse sectors like local newspapers, hair salons, savings institutions, and gas stations (Jensen and Kletzer, 2005). The essential element for these industries is a population base, so geographically speaking, these industries locate where people live. New Economic Geography tells us that while the absolute number of firms will vary by population size, the relative size of these industries will be similar in different cities. In general then, Los Angeles will have a relatively similar percentage of its population employed as hair stylists as cities like Philadelphia or Minneapolis do. Non-tradable industries do not agglomerate and do not take advantage of external economies of scale.

Tradable goods, however, do benefit from agglomerations in space. These are goods that are created in one area and can be consumed elsewhere. Industries that produce tradeable goods are also referred to as export-oriented industries because goods are sold as exports to other places, both domestically and internationally. In terms of the information technology industry, one can observe that the goods and services produced by Apple and Google are bought and/or used by consumers all over the world. Because tradable industries can take advantage of agglomeration, they are able to increase efficiency through external economies of scale. The specific dynamics of tradable, export-oriented industries are presented next.

The first component of agglomeration is *input sharing*. In today's economy, a single good can be made of components from all over the world. Many firms no longer manufacture and design everything in-house, within the same company. Outsourcing (which means outside the firm, not necessarily abroad) refers to intermediary goods and services that are constantly being traded from business to business. This gives rise to input sharing. Because a cluster is made up of companies that play in the same general arena, the intermediary goods and services required for the products across different companies



Sqirl Booth at the Altadena Farmers' Market; jams are considered a tradeable good.

Photograph by Kelly Rytel, Altadena, Los Angeles, CA

can be produced in great quantity by a few specialized intermediary firms. The firm producing the intermediary good takes advantage of internal economies of scale, thereby lowering per unit price of output, which also benefits the businesses to which they are selling. Although some suppliers can be located outside the geographical industry agglomeration, if the good being produced relies on the transmission of complex information between companies, the input supplier will locate near the other businesses. Co-location is necessary because face-to-face interaction is very important during creative activities—like when components are being designed and tested—when the information is “imperfect, rapidly changing, and not easily codified” (Storper and Venables, 2004, p. 351).

A second characteristic of agglomeration is *labor matching*. The basic idea is that in agglomeration economies, a large number of potential employees in the same geographic locale have skill sets which many firms desire and this situation benefits both the employers and the employees. Employers benefit because when they are expanding, the firm can more easily find an employee within the labor pool that possesses a certain skill set. The rapid ability to hire also means that firms can more readily downsize, without the fear they might struggle to re-hire someone with a similar skill set. These benefits to the firm outweigh the costs of doing business near other

Learning - A New Economic Geography term referring to how co-located individuals and businesses within an industry share knowledge with each other.

Face-to-face interaction gives rise to trust, the exchange of ideas, collaboration, and ultimately, innovation. Individuals who move between different firms facilitate the movement of information between firms.

NEG helps explain why knowledge industries—including information technology, financial services, and artisanal goods—cluster in space. In the US in the last 50 years, these industries have experienced higher growth than others like manufacturing. Urban artisanal foods may benefit from agglomeration.

businesses, like when employees are poached to work at other firms. From the perspective of the employee, benefits include a greater choice of firms where their skill set is valuable and shorter periods of unemployment in that region compared to other regions without that industry agglomeration. A person with a specific skill set also achieves higher wages in the long-run by working inside an industry agglomeration instead of outside it (this will be further explained in the next paragraph on learning). An additional benefit that arrives from an industry agglomeration is that the large volume of firms and employees in one place increases the quality of matches.

The third benefit of agglomeration is *learning*. Learning in the context of an agglomeration refers to knowledge spillovers, or when knowledge spreads from one person to another and from one company to another. Existing knowledge is often the basis for innovation, one of the most important aspects of economic growth. Innovation can mean producing something new or producing something in a new way (i.e. increasing efficiency by doing more with less). Therefore, firms will try to increase interaction between employees because it is the face-to-face interaction that gives rise to trust, the exchange of ideas, collaboration, and ultimately, innovation. Individuals who move between different firms facilitate the movement of information between firms. These knowledge spillovers benefit firms and can also benefit individual employees as they accumulate more and more skill sets which translate to higher and higher pay throughout their lifetime. A key indicator of the phenomenon of learning within agglomerations is that patent applications are concentrated in space (Feldman, 2000). Moreover, outside of the New Economic Geography, Soja (2000) argues that cities as agglomerations in and of themselves can generate innovative ideas.

These three concepts—input sharing, labor matching, and learning—all cause firms within one industry to locate in the same place if the good is tradable and exportable. By understanding the elements of the NEG,

we can understand why certain regions with specific industries have higher growth rates than other places. In the past 50 years, more jobs in the United States have been created in knowledge industries than in manufacturing ones (Moretti, 2012). Based on this information, the NEG points to three sectors of the economy which have been drivers of innovation and therefore economic growth: 1) information technology (used as an example above); 2) financial and producer services (like the financial cluster in New York City) and; 3) artisanal or craft goods. This researcher believes that certain goods of urban agriculture can be considered an artisanal or craft good and therefore could benefit from an industry agglomeration. How urban agriculture may be explained by NEG is the focus of the Analysis portion of this chapter, but first it is also important to understand the context of the industrial food industry.

Industrial Agriculture

As presented in the previous section, a core feature of capitalism is the drive to always be increasing efficiency. In the context of capitalistic competition, increasing efficiency means lower prices and more business. The constant search for increasing efficiency can also change the fundamentals of an industry, resulting in a new business model (Walker and Storper, 1991). The emergency of the modern industrial food system is an example of such a change.

Throughout most of human history, the majority of food was consumed near its point of production, and with few exceptions even tradable food could not travel far from its origin before spoiling. However, with technical innovation in the growing, transport, and storage of food, commodities crops were eventually grown as export goods.

In the 20th Century, machines utilizing fossil fuels began to replace human labor. Mechanical labor allowed greater swathes of land to be farmed and more animals to be raised in concentrated areas. Based on technological innovation, factory farming and *industrial*

Industrial Agriculture -

Utilization of crop inputs (pesticides, herbicides, or fungicides), animal inputs (growth hormones or antibiotics), and technical innovations (machines or genetic modification) to grow food and raise animals utilizing economies of scale.

Unlike large agribusiness corporations, small-scale local food producers can provide consumers with food without incurring many of the negative externalities associated with the industrial food system.

Green Revolution - A period in the 20th Century when research and development in agricultural technology advanced yield of certain crops.



*Free-range chickens raised at the Cityfarm.
Photograph by Kelly Rytel, Glassell Park, Los Angeles, CA*

agriculture models began to replace traditional methods of farming and animal husbandry. Efficiency gains were achieved through internal economies of scale. After World War II, the technological advances in petrochemistry and plant biology of the *Green Revolution* further accelerated the transformation of food systems worldwide from non-tradable subsistence sectors into industrial sectors dependent upon large inputs of energy, pesticides, and fertilizers—mostly derived from fossil fuels (Altieri, 2009). This pattern has continued to the present day, and has most recently resulted in the widespread deployment of genetically modified organisms (GMOs) whose properties are designed not only to improve food output but also to secure market share and maximize profitability for the entities (typically large multinational corporations) that develop them (Patel, 2007). In his book *The Omnivore's Dilemma*, popular food author Michael Pollan writes that industrial agriculture includes “any food whose provenance is so complex or obscure that it requires expert help to ascertain” (2007, p. 17).

These technological advances and changing management structures have created many desirable attributes in the global food system. For example, commodity crops like wheat and corn have seen big increases in yield and total food output; there is year-round access to seasonal food and lower food prices. However, while these increases in efficiency are desirable in an economic sense,

the negative consequences of our current food system are also well known (Altieri, 2009; Horrigan, Lawrence, & Walker 2002; Kimbrell 2002). Economists call these consequences “negative externalities” because in the buy-sell transaction of food between two entities, the negative consequences of producing that good are external to the two parties involved. Therefore, these consequences and their monetary and nonmonetary costs are not incorporated into the price of the product. Most of these consequences are concepts and actions that economists have a difficult time pricing, like culture, the environment, and biodiversity. Examples of these negative externalities include: a loss of diversity due to the standardization of products (Altieri), a food chain that spans thousands of miles of land and oceans which reduces freshness and increases greenhouse gas emissions (Pollan, 2008), a change in global dietary patterns resulting in higher rates of preventable diseases and greater food insecurity (Schlosser, 2001), labor force abuses (Schlosser; Estabrook, 2011), landscapes polluted with runoff and pesticides due to the chemical-intensive nature of agri-business (Altieri, 2009), changing cultural landscapes as genetically modified food replaces varieties of important crops (Fitting, 2011), a lower number of rural farmers globally in the peasant class (Desmarais, 2007), and higher farmer indebtedness (Altieri, 2009). These are the high costs of cheap food (Pollan, 2007).

Most of the negative aspects of industrial agriculture were eventually identified, and in response a food movement rose to meet demand for organic food, grown free of pesticides, herbicides, and fungicides. By 1977, California created Certified Farmers Markets (California Department of Food and Agriculture, 2013). Unlike large agribusiness corporations, small-scale local food producers can provide consumers with food without incurring many of the negative externalities associated with the industrial food system. For example, vendors can sell different or more varieties of food such as red, yellow, and purple potatoes. This can help preserve the genetic diversity of food, as in the case of heirloom tomatoes and heritage livestock that haven't been

This research examines the social dynamics that have given rise to the resurgence of small-scale local food production and urban agriculture, and identifies the emerging tensions between individuals and the larger economic networks in which they find themselves.

Agency - The power an individual has in shaping their environment.

genetically modified to produce a standard product. Food can be harvested and brought to market on the same day, which preserves nutrients that are otherwise lost as fresh food quickly begins to degrade. Moreover, organic methods eliminate the pesticides and other chemicals that have a negative effect on the surrounding environment.

Finally, many consumers find value in the opportunity to buy local and support the regional economy and are willing to pay a premium for food they view as being of higher quality, partially because it is less socially and environmentally harmful than that produced by industrial agriculture.

Articles Informing Methodology

This research employs New Economic Geography methodology developed by Boggs and Rantisi (2003) and Wai-chung Yeung (2003). Boggs and Rantisi outline how the NEG literature has focused on the analysis of social interactions of players within a given economic network, and they have identified several key related topics: “conventions underpinning social relations,” the “graphic extent of these relations,” and how “socio-economic processes can generate similar landscapes of restructuring” (2003, p. 109). Boggs and Rantisi also observe that the methodological approaches of other disciplines have been incorporated into a NEG analysis. Wai-chung Yeung argues that traditional methodological approaches no longer achieve accurate results, and that NEG addresses this problem by analyzing “social embeddedness of economic action, mapping shifting identities of social actors, and exploring the role of material and discursive contexts in shaping economic behavior” (2003, p. 442).

Following these examples, this research examines the social dynamics that have given rise to the resurgence of small-scale local food production and urban agriculture, and identifies the emerging tensions between individuals and the larger economic networks in which they find themselves. This literature also clarifies approaches to assessing individual *agency*, meaning the power of individuals

within the context of their surrounding economic network, and also offers guidance for how to define an appropriate geographical focus in order to integrate findings at both macro-economic and micro-economic scales.

METHODOLOGY

The first methodological determination was that the focus would be on for-profit growers that either grow or process food in an urban setting. These economic players are at the heart of the urban agriculture industry.

This researcher elected to focus on a farmers market because markets have historically been a distribution method utilized by those engaged in farming techniques that run counter to the industrial agricultural system (see Literature Review). In order to discover which farmers markets in Los Angeles County had a great number of urban agriculturists selling their products, research was first done by extensively browsing online newspaper articles and food-centered magazines about the burgeoning field of urban agriculture in Los Angeles County. Secondly, visits to several farmers markets were conducted, including Santa Monica Farmers' Market (Wednesday market), Mar Vista Farmers' Market, Motor Avenue Farmers' Market, and Atwater Village Farmers' Market. Eventually, the Altadena Farmers' Market was chosen because of its high number of vendors growing and processing food in the city. Vendors selling fresh, prepared food to be consumed on-site are not included in the analysis of this report.

Thirdly, to understand the greater context, research in Spring 2013 was also conducted about other vendors at the Altadena Farmers' Market that either grow food or process food in a non-urban setting. Data points included location of primary business facilities and the basic goods they sell, which was collected from the Altadena Farmers' Market Facebook page. Additionally, other food-related entities operating in Altadena were found through Internet research and interviews and mapped to help understand the greater institutional environment of the neighborhood of Altadena, an unincorporated area of Los Angeles County.

This researcher examined both the details of each company and the larger economic context of Los Angeles County to assess the status of the urban agriculture industry.

Following Yeung (2003), this researcher chose to conduct semi-structured interviews in-situ wherever possible and over the phone when necessary. Attention was paid to understanding the networks around urban agricultural businesses and understanding the contexts in which they arose, with particular attention given to locational decisions.

Two important considerations were guided by the work of Bogg and Rantisi (2003). First, this researcher examined the tension between an individual's agency in decision-making and the legal restrictions which prevent certain choices. For each business decision, this researcher acknowledged that certain activities may be motivated by intrinsic goals of changing the dominant food system, while others are driven by raw market forces, which is to say that actors in the urban agricultural sector may have constraints that are beyond their ability to influence. Second, consideration was given to how to integrate both the micro-unit of analysis (how each grower runs his or her business) and the macro-unit of analysis (how the industry in Los Angeles functions as a whole). Only by examining both the details of each company and the larger Los Angeles County context can an accurate assessment of the status of the urban agriculture industry be reached. Moreover, this local context must be placed into an overarching global context to construct a genuinely complete understanding of the sector. This research is the first to begin to examine these issues in Los Angeles and should be followed up on to include more case studies. Only in this way will a more comprehensive understanding of the industry be developed.

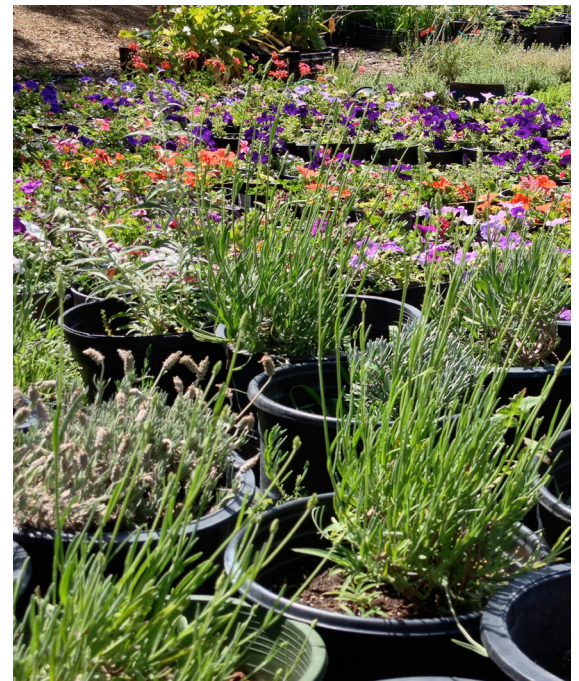
Once the geographic focus of the study was determined to be the Altadena Farmers'

Market and the methodology determined, this researcher visited the Altadena Farmers' Market and met many of the farmers and crafters. Semi-structured interviews took place with 13 different entities, both over the phone and in-person at urban farms.

FINDINGS

The data collected through all research methods are summarized over the next few pages. First, two data tables and corresponding maps of primary locations of all the Altadena Farmers' Market fresh food and artisanal food vendors are presented.

Second, information about additional food-related entities either located in Altadena or connected to the Altadena Farmers' Market is presented and corresponding locations can be found in the map.



*Plants at Muir Ranch.
Photograph by Kelly Rytel, Pasadena, CA*

ALTADENA FARMERS' MARKET: FRESH FOOD VENDORS, SPRING 2013

Of the 38 vendors at the Altadena Farmers' Market:

- 13 are fresh food vendors

- 12 are artisanal food vendors

- 11 are prepared food vendors

- 3 are non-food vendors (Pine Street Products is both a fresh food vendor and a non-food vendor).

Name of Entity	Urban or Rural	Goods Sold	Primary Location	Approximate Miles from AFM
Chuy's Berry Farm	Rural	Raspberries, blueberries, strawberries and blackberries	San Luis Obispo, CA	230 miles
The Cityfarm	Urban	Chicken and duck eggs; additionally, fruit	Glassell Park, Los Angeles, CA	13 miles
Dey Dey's Best Beef Ever	Rural	Beef, chickens, chicken eggs	Lompoc, CA	171 miles
Ellwood Canyon Farms	Rural	Fruits and vegetables	Goleta, CA	110 miles
Etheridge Organics	Rural	Stone fruits, citrus, and grapes	Orosi, CA	203 miles
Fat Uncle Farms	Rural	Raw and flavored blistered almonds, almond butter and almond milk	Wasco, CA	138 miles
George Bliss Premium Avocados	Rural	Avocados and sweet corn	Carpinteria, CA	105 miles
Jazzy Sprouts	Urban	Thirty seven different types of beans and sprouts	Reseda, Los Angeles, CA	27 miles
Moua Farms	Rural	Root vegetables, Asian greens, sugarcane, and herbs	Clovis, CA	285 miles
Pine Street Products	Urban	Occasionally citrus and herbs	Altadena, Los Angeles, CA	<1 mile
Rice & Beans	Rural	Procurer of organic bulk dried goods, like beans, rice, popcorn, oats, etc.	Silverlake, Los Angeles, CA	n/a
Suncoast Farms	Rural	Cruciferous vegetables, dried beans	Lompoc, CA	171 miles
Whisper Farms	Urban	Aquaponically-grown lettuces	Pasadena, CA	4 miles

ALTADENA FARMERS' MARKET: FRESH FOOD VENDORS, SPRING 2013



Base map source: ESRI; data collected by researcher—see Economics and Geography Appendix for detailed sources

ALTADENA FARMERS' MARKET: ARTISANAL FOOD VENDORS, SPRING 2013

Of the 38 vendors at the Altadena Farmers' Market:

- 13 are fresh food vendors

- 12 are artisanal food vendors

- 11 are prepared food vendors

- 3 are non-food vendors (Pine Street Products is both a fresh food vendor and a non-food vendor).

Name of Entity	Urban or Rural	Goods Sold	Primary Location	Approximate Miles from AFM
Brassica and Brine	Urban	Wild-fermented products (kombucha, sauerkraut, kimchee)	Van Nuys, Los Angeles, CA	23 miles
Drake Family Farms	Urban	Goat cheese	Ontario, CA	35 miles
Fat Uncle Farms	Rural	Raw and flavored blistered almonds, almond butter and almond milk	Wasco, CA	138 miles
The Growing Home	Urban	Variety of dried herbs (some medicinal and rare) and dried fruit	Diamond Bar, CA	30 miles
Klausesbees	Urban	Honey	Various around Southern California: past sites include 4 along Angeles Crest Highway (two mapped), George Bliss Avocados (mapped), barley fields, alfalfa fields, and desert flowers	various
Milk Man LA	Urban	Third party distributor of crafted, artisanal cheeses from California	Los Angeles, CA	n/a
Molonay Tubilderborst	Urban	Bread and pastries, condiments	Downtown Los Angeles, CA	14 miles
Morning Glory Confections	Urban	Brittle and caramels	Atwater Village, Los Angeles, CA	13 miles
Organic Pastures	Rural	Raw dairy	Fresno, CA	290 miles
Plow & Gun	Urban	Locally-roasted coffee beans (prepared coffee is outside the scope of this study)	Placentia, CA	38 miles
Spade and Seed	Urban	Nursery plants	South Pasadena, CA	7 miles
Sqirl Preserves	Urban	Jams	Silverlake, Los Angeles, CA	15 miles

ALTADENA FARMERS' MARKET: ARTISANAL FOOD VENDORS, SPRING 2013



Base map source: ESRI data collected by researcher—see Economics and Geography Appendix for detailed sources

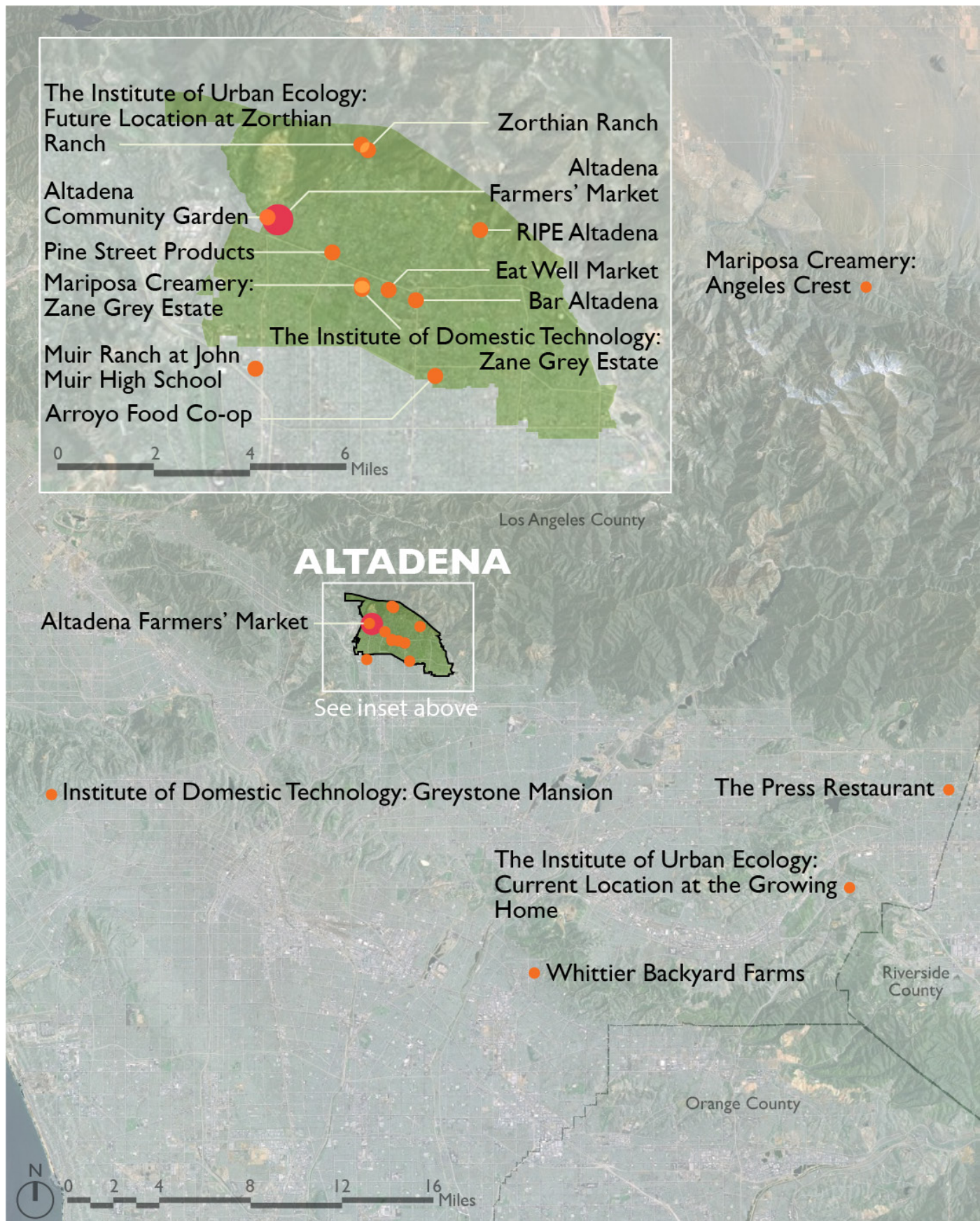
ALTADENA FOOD-RELATED ENTITIES, SPRING 2013

Institution and Relationship to Altadena Farmers' Market	Nature of Entity	Location(s)
<p>Institute of Domestic Technology (IDT)</p> <p>Altadena Farmers' Market Sponsor</p>	<p>Hosts classes about homemade food refinement. Past classes include: Home Coffee Roasting, Coffee Extraction Lab, Deconstructing Condiments; Making Nocino (liqueur), Milk Series: three Cheese making Classes, Creating a PB&J (with homemade orange marmalade and almond butter), and Cocktail Crafting</p> <p>Additionally, ITD has organized an Organic Farm & Winery Field Trip</p>	<p>Primary location: Altadena, Los Angeles, CA (including classes hosted by Mariposa Creamery on the Zane Grey Estate)</p> <p>Secondary location: Beverly Hills, Los Angeles</p> <p>Field Trip locations (not mapped): organic farms in Santa Barbara County (including Ellwood Canyon Farm) and biodynamic wineries in Goleta, Santa Ynez, and Los Olivos</p>
<p>Mariposa Creamery</p> <p>Urban homesteading including goat keeping in Altadena; owners currently run The Press Restaurant and are set to open Bar Altadena Restaurant</p>	<p>Personal goat keeping and cheese-making, also sells goats; hosts classes programmed by the Institute of Domestic Technology and other entities</p>	<p>Primary location: Zane Grey Estate in Altadena, Los Angeles, CA</p> <p>Secondary location: recently bought 70 acres of land near Angeles National Forest to start "Angeles Crest Creamery"</p>
<p>Institute of Urban Ecology</p> <p>Cofounded by Rishi Kumar, director of the Growing Home, a vendor at the Altadena Farmers' Market</p>	<p>Center promoting ecological activities in urban areas by hosting classes and workshops, publishing online newsletters, providing internship and volunteer opportunities, and hosting a radio program called "Focus on Food" on KPFK 90.7 FM</p>	<p>Current location at The Growing Home and Learning Center</p> <p>Future location at Zorthian Ranch</p>
<p>Pine Street Products</p> <p>Vendor at Altadena Farmers' Market of non-food items</p>	<p>Backyard urban farmer, seasonally selling organic citrus and herbs and regularly selling handmade soaps, lotions, massage oils, and balms that utilize herbal infusions, botanical colors, and essential oils</p>	<p>Altadena, Los Angeles, CA</p>
<p>Muir Ranch at John Muir High School</p> <p>Occasionally sells flowers at the Altadena Farmers' Market</p>	<p>Two-acre garden at John Muir High School selling Community Supported Agriculture (CSA) produce and flower boxes; sells flowers at farmers markets; buys produce from various vendors; sells produce to various CSAs (including Whittier Backyard Gardens)</p>	<p>Pasadena, CA</p>
<p>Whittier Backyard Farms</p> <p>Declined selling at Altadena Farmers' Market</p>	<p>Backyard urban farmer, sells CSA boxes consisting of a mix of produce from Whittier Backyard Farms and Muir Ranch</p>	<p>Whittier, CA</p>

ALTADENA FOOD-RELATED ENTITIES, SPRING 2013

Institution and Relationship to Altadena Farmers' Market	Nature of Entity	Location(s)
Zorthian Ranch Located in foothills near Altadena	Eco-community practicing permaculture; future home of the Institute of Urban Ecology	Altadena, Los Angeles, CA
Altadena Community Garden Community Garden in Altadena	Community Garden of individually maintained plots	Loma Alta Park in Altadena, Los Angeles, CA; adjacent to the Altadena Farmers' Market
RIPE (Residential In-Season Produce Exchange) Altadena Food swap based in Altadena	Neighbors swap excess food grown in their gardens; also host classes from time to time	Various places in Altadena, Los Angeles, CA
Arroyo Food Co-Op Future food cooperative based in Altadena	Cooperative Grocery Store, where shoppers own a part of the grocery store	Altadena, Los Angeles, CA
Eat Well Market Prepared food swap based in Altadena	Once-a-month market where members share prepared food and artisanal food products prepared at home with mostly locally-grown ingredients	"Camp Mariposa" in Altadena, Los Angeles, CA

ALTADENA FOOD-RELATED ENTITIES, SPRING 2013



Base map source: ESRI; data collected by researcher—see *Economics and Geography Appendix* for detailed sources

Altadena, an unincorporated neighborhood of Los Angeles County, has a history of agriculture. Today, many entities grow food for subsistence, community food-sharing, or commercial purposes.

ANALYSIS

Based on the interviews and additional research conducted, this researcher came to several conclusions about the urban agriculture industry in Los Angeles County. First, an overview of Altadena and its specific character is discussed. Then conclusions are reached for categories of geography, the institutional environment, and general business characteristics. The conclusion addresses the question: "Is Altadena a hotspot or is it not?"

The Nature of Altadena

The promotion of urban farmers by the Altadena Farmers' Market is a factor of the historical nature of Altadena, in which geography plays a role. In the 1800s, the area was largely agricultural and focused on growing grapes for wine. The legacy of large land plots is reflected today and many residents tend large gardens on their property. The use of Altadena as an agricultural activity site is tied to the early days of Los Angeles when the area was considered rural and therefore land prices were cheaper. The area was perhaps less affected by forces of urbanization because it is located next to a mountain range, which acts as a natural barrier to urbanization. Classification as an unincorporated part of Los Angeles County may also contribute to increased agricultural activity (see Land Use Regulation chapter). Moreover, the specific nature of the residents, described to this researcher as "hippie-like," has helped create a legacy of urban agriculture which contributes to the feeling of Altadena as an alternative food locale. One example is a community member who provides compost to urban agriculturists and speaks in rhymes. The particular character of the area is also manifested by food-related organizations located in Altadena, including R.I.P.E. Altadena, a food-swap venture where local residents share the excess produce they cannot consume or give away to friends and family. Other entities that manifest interest in urban agriculture include the Altadena Community Garden and the future Arroyo Food Co-operative. The

Eat Well Market is a community event which takes place once a month and includes a prepared food swap between its members.

Another entity found within Altadena which supports the agricultural character of the area is the Mariposa Creamery. The owners of this venture contribute to the area's food culture by practicing urban homesteading; they grow produce in their garden, harvest food from fruit trees, and practice animal husbandry with goats, chickens, and bees. Although Mariposa Creamery raises goats and makes goat cheese, they currently do not sell their cheese commercially. Income is derived from other means, including from selling goats and from farm tourism. The owners participate in the greater food economy in a different way as well: they currently run The Press restaurant and are set to take over Bar Altadena in the future. As is explored later in this chapter, Mariposa Creamery also hosts classes through the Institute of Domestic Technology and partners with other food entities like the urban homesteading tour organized by Brassica and Brine. Even though Mariposa Creamery does not directly participate in the Altadena Farmers' Market, entities like this still shape the veracity of the food scene in Altadena today.

There are two additional entities located in the foothills of Altadena: the current Zorthian Ranch and the Fair Oaks Farm, the future home of the Institute of Urban Ecology. Plans for the Zorthian Ranch include a self-sustaining eco-community. The Institute of Urban Ecology (IUE), co-founded by the Growing Home's Rishi Kumar (a vendor at the Altadena Farmers' Market), strives to create information and provide education about a wide variety of ecological issues encountered in an urban area. Activities include workshops and classes, the Focus on Food radio program (broadcast on KPFK 90.7FM and found on the IUE's website), and an online newsletter. The IUE currently has no physical location—they host workshops in collaboration with other entities—but plans to create a 22-acre farm

The Institute of Domestic Technology hosts a wide array of classes about how to process food in a home setting.

An informal urban food market ran in Altadena from December, 2010 to May, 2011.

adjacent to the Zorthian Ranch. Future agricultural activities include planting and maintaining fruit orchards and herb gardens, raising livestock, and creating apiaries.

Finally, another food-related entity in Altadena is the Institute of Domestic Technology (IDT), founded by Joseph Shuldiner. The institute derives income from hosting classes on how to process food in a home setting, including roasting coffee at home, creating common condiments, making nocino (an Italian liqueur), cheese-making, creating almond butter and orange marmalade for PB&J sandwiches, and crafting cocktails. Locations of the events have included the Zane Grey Estate and the Greystone Mansion in Beverly Hills. The Institute's director, Joseph Shuldiner, emphasizes that the quality of any food product will only be as good as the quality of the ingredients. In this way he educates the students on how most food today is created (through the industrial food system) and how food can alternately be sourced (like at a farmers market). He also enjoys exposing class participants to the possibilities of urban foraging. For example, during the nocino-making class, green walnuts are foraged within the urban area and used to make the liqueur.

All of these characteristics contribute to the specificity of place and to the reason why the Altadena Farmers' Market includes these urban farmers. The direct event that led to the creation of the formal Altadena Farmers' Market can be traced to the presence of an informal urban market in Altadena, which started in December, 2010. The organizer of the informal market was Gloria Putman of Mariposa Creamery. The monthly event was hosted at Ms. Putman's personal residence, a historic property known as the Zane Grey Estate that was placed on the National Register of Historic Places in 2002. Ms. Putman spread the word through the community and received about 30 responses from people who were interested in selling prepared food, artisanal foods (like preserves), and excess food they had grown in their yards. One nearby neighbor sold eggs laid by his brood of 100 chickens and ducks. While there were some



*Red Chard at Muir Ranch.
Photograph by Kelly Rytel, Pasadena, CA*

people selling excess produce gathered from their property, the majority of vendors sold prepared food. Ms. Putman also reached out to Mr. Shuldiner and requested he provide educational events and programming during the markets, which ran through May, 2011.

In addition to the individuals interested in creating an underground market outside of the traditional food system, the institution Arroyo Time Bank was involved in this event. Members of the time bank were allowed to earn time dollars by volunteering their time. At the market, members could purchase items with time bank dollars, barter with their own wares, or pay cash.

Every month attendance at the market grew, culminating with approximately 1,000 guests at the sixth and final market. Within an hour of the event starting, all of the produce had been sold, but most people stayed for the full amount of time, taking advantage of the educational events like a cooking demonstration using ingredients from the market (except for basics like olive oil and salt) and events like the cookbook exchange. The Los Angeles County Health Department* (see page 102) eventually contacted the organizers because of its unpermitted status and the urban market no longer hosted events.

Once the informal market was shut down* (see page 102), Ms. Putman was approached by the Los Angeles County Parks Department, which was interested in hosting a weekly farmers market in Loma Alta Park (the

Mr. Shuldiner wanted the formal Altadena Farmers' Market to maintain many of the qualities which he considered radical about the informal urban market, including 1) having an urban focus, 2) serving the role of incubator for small, agricultural companies, and 3) being a place of information exchange.

The market's non-profit sponsor is the Altadena Community Garden while the operator is the Institute of Domestic Technology.

current location of the AFM). Eventually Mr. Shuldiner became the driving force behind the AFM when his Institute of Domestic Technology became the market's operator. In accepting the position, Mr. Shuldiner wanted to maintain many of the qualities which he considered radical about the urban farmers market, including that 1) the market was urban-focused, 2) it was an incubator for small, agricultural companies, and 3) it was a place of information exchange (like the demonstration events).

Mr. Shuldiner credits Greta Dunlap for guiding him during the creation of the AFM. Ms. Dunlap has been the market manager at the Beverly Hills Farmers' Market and at the South Pasadena Farmers' Market. She offered to become Mr. Shuldiner's mentor along the way and dedicated a significant amount of time over the first year of the market to help the AFM stabilize.

Once Mr. Shuldiner decided to become the operator of the AFM through his business entity the Institute of Domestic Technology, he needed to secure a non-profit sponsor (other choices of sponsor include a certified farmer or a government organization). The current sponsor is the Altadena Community Garden, a collective of volunteers who garden individual plots in a larger space adjacent to Loma Alta Park. The first AFM market in May, 2012 was the largest to-date. Though exact numbers are not kept, hundreds of individuals shop at the market each week.

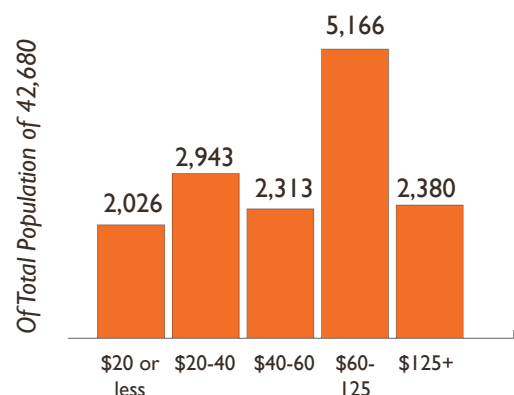
Taking into consideration the historical context of the Altadena Farmers' Market, the following conclusions are based off this researcher's primary and secondary research. First, conclusions relating to geography are discussed, then factors contributing to the general business environment are presented, and finally specifics about business models are explored.

Impacts of Geography

The Location of the Altadena Farmers' Market

The location of the Altadena Farmers' Market may factor into whether or not a vendor will participate. Especially for smaller ventures (like a sole proprietorship), the amount of time it takes to travel to and from the market can be prohibitively high (see Distribution chapter). Of the vendors interviewed, those that only sell at the Altadena Farmers' Market are located closer to the market compared to those interviewed that also sell at other farmers markets. Therefore, this researcher concludes that smaller businesses are more likely to be willing to participate in a farmers market located near their place of business—which is often also their primary residence. Larger businesses are more likely to distribute through multiple venues and therefore a single market's location has less of an impact on the business model. However, because many smaller businesses are also relatively young, it is unclear whether these ventures will increase in size and distribute through additional farmers markets or through alternate modes of distribution.

Additionally, the income of the Altadena area is likely a factor in creating demand for local, fresh products. As can be seen in the graph below, even though Altadena has a high percentage of low-income residents, the area also has a high proportion of high-income residents.



Household income in thousands of 2000 dollars
Source: Los Angeles Times "Mapping L.A.," 2013

Vendors' primary business location depends on the product they are producing: fresh food favors rural locations while artisanal goods favor urban locations.

Rural locations allow for greater internal economies of scale to be reached.

Urban locations allow for easier access to suppliers and markets. Additionally, innovation is more prevalent in cities.

Compared to industrial agriculture, aquaponics reduces water usage by 95%.

Because some of the goods sold at a farmers market are consumed like non-tradeable goods—specifically, the fresh foods (explored in subsequent conclusions)—this researcher believes that the majority of AFM customers come from the nearby neighborhood. This is supported by the reality that Los Angeles has many farmers markets around the city and that many medium-sized farms distribute at several farmers markets within Los Angeles to reach a broader customer base.

Fresh Food Vendors Favor Rural Locations

Based on the geography of primary production locations (displayed in maps above), fresh food vendors are more likely to be growing in more rural areas. At the Altadena Farmers' Market, the nearest small-to-medium farm that sells fresh food is located in Santa Barbara County, about 100 miles away from the AFM. Even though the general Santa Barbara area has a mix of urbanized areas and agriculture-focused areas, the county is more rural than places located near Altadena within Los Angeles County. Other urbanized places around Los Angeles can be considered more rural because of their lower density and lower land prices—Ventura County to the west, Riverside County to the east, and San Diego County to the south. Farmers from agricultural areas within these counties also serve farmers markets in Los Angeles. Based on interviews, rural farmers tend to have larger farms than urban farmers.

This researcher concludes that one advantage of farming in a rural area is the ability to utilize internal economies of scale. If a farmer needs to grow more produce to cover up-front costs, it is cheaper for them to do so in a rural setting because of cheaper rural land prices. But while land is cheaper, rural areas also have the disadvantage of being located further away from the markets in which the products are sold—in this case, farmers markets. Relatively low transportation costs make it possible for rural farms to service urban markets hundreds of miles away. High overhead costs (like land), larger amounts of produce,

and low transportation costs also mean that fresh food vendors are more likely to distribute at more than one farmers market and/or through additional distribution models.

Despite the aforementioned advantages of rural locations, four fresh food vendors at AFM are located in an urban area: The Cityfarm, Jazzy Sprouts, Pine Street Products, and Whisper Farms. The Cityfarm proprietor chose to be in the city because of the higher quality of life living in a city (including access to a variety of cultural amenities) versus living in a rural area; additionally the proprietor grew up in the area of his farm and felt a connection to place. Pine Street Products only sells their excess citrus fruits and herbs when available; because their main goods are non-food products the rural advantages of cheaper land would not positively impact their business model. Finally, Whisper Farms is located in an urban area; being located less than four miles away from the farmers market is an advantage because it reduces transportation costs. Moreover, Whisper Farms grows food via aquaponics. Because growing food aquaponically can be considered more innovative compared to traditional farming—particularly because it uses 5% of the water compared to traditional agriculture—it is unsurprising that this activity takes place in an urban setting.

Artisanal Vendors Favor Urban Locations

Based on the evidence provided by the vendors at the Altadena Farmers' Market, vendors selling artisanal goods are more likely to be located in an urban setting. Artisanal foods, which can often be considered new in some way, are also more likely to be created in cities than in rural areas; interaction between people and the exchange of ideas is more active in a city (Soja, 2000). These vendors do not require vast amounts of land, and being located in a city provides many advantages like access to commercial kitchens, proximity to suppliers, and proximity to markets. The only two artisanal producers at AFM from rural areas are those that supply milk; Organic Pastures needs more space for raising cows to

The Altadena Farmers' Market hosted a "(sub) urban farmers retreat" for urban vendors which included teaching basic business skills, as most vendors had no previous experience selling food commercially.

This researcher concludes that if urban operations with animals want to expand their businesses, the advantages of rural locations may outweigh the advantages of urban locations.

Many entrepreneurs interviewed identified the complex web of local, county, state, and federal regulations as an obstacle to effectively running their business. This was especially pronounced for ventures doing business in different locations.



Muir Ranch.

Photographs by Kelly Rytel, Pasadena, CA

produce raw milk and Fat Uncle Farms grows almonds to produce almond milk.

However, artisanal food vendors who utilize animals in their processes seem to be under more pressure to scale up than other artisanal ventures. For example, currently, the Mariposa Creamery raises goats in an urban setting, but they do not sell their cheese. However, the venture recently acquired 70 acres of land in a rural area in the Los Angeles region in order to raise more goats and perhaps sell cheese commercially. This researcher concludes that if urban operations with animals want to expand their businesses, the advantages of rural locations may outweigh the advantages of urban locations.

Institutional Environment

Farmers Markets as Key Sales Venues for Urban Agriculturists

The Altadena Farmers' Market is the only venue for distribution for some its urban agriculturists. This is partially attributable to the fact that Assistant Manager Elizabeth Bowman, who wrote her Master's thesis about

farmers markets in California and the organic food movement, actively sought out first-time urban vendors for the market. Ms. Bowman's research has been utilized to provide support for farmers selling their products for the first time. The Altadena Farmers' Market also hosted what they call a "(sub)urban farmers retreat", which included teaching basic business skills, as most vendors had no previous experience selling food commercially.

Unclear Regulations Constrain Urban Agriculture Entrepreneurs

Many entrepreneurs interviewed identified the complex web of local, county, state, and federal regulations as an obstacle to effectively running their business. This was especially pronounced for ventures doing business in different locations. For example, one vendor said that different health inspectors came to different conclusions and this inconsistent information had a real monetary impact on their business. Based on one regulator's instructions, capital equipment was bought; however, a subsequent inspector concluded the capital equipment was not necessary. Time and money was spent on a

Food sold at the Altadena Farmers' Market can be considered of better quality, as foods are for the most part organically grown and harvested on market day.

Because farmers market goods are considered "local", this researcher believes entrepreneurs growing or processing food in or near Los Angeles achieve a higher price-point by selling at a farmers market in Los Angeles instead of shipping their food to markets further away.

situation that could have been avoided. One venture was also notified of a local infraction but chose to argue against the regulation based on ambiguous language. Different interview subjects reported various degrees of cooperation with government regulators.

Industry Characteristics

Vendors at Farmers Markets Sell Food of Higher Quality

The majority of entities interviewed sold their goods for prices higher than their competition. These ventures—both rural and urban—rely on selling goods of a higher value at higher prices. While the industrial agriculture system produces food at a lower price point, vendors at farmers markets are not selling to customers whose primary concern is the monetary value of a commodity. Their goods are valuable because they are considered of better quality, as foods are for the most part organically grown and harvested on market day.

However, once again tensions to scale up are present as creating high-quality goods is costly. Based on interviews, this tension is more pronounced with animal operations. Because start-up costs for many businesses can be very high—including rent or mortgage payments, utilities, initial cost of equipment—the need to produce more units to reduce the per unit cost may be necessary to continue business. Barriers to scaling up include the extra costs of time and money to add employees, understanding multiple jurisdictional regulations, and funding to pay for up-front costs.

Altadena Farmers' Market Fresh Food Vendors Serve the Local Market

The fresh food sold at the Altadena Farmers' Market has characteristics of both a tradable and non-tradable good. Tradable goods are generally made to sell to the "export market" while non-tradable goods, goods that are produced and consumed in the same place, serve the "home market." Fresh food is a tradable good; many of the AFM fresh food

vendors export their product from a rural area to be sold in Altadena. In the case of farmers markets, fresh food displays some characteristics of non-tradable goods. One of the non-tradable features is derived from selling at farmers markets, which are perceived to serve "home markets". Non-tradable goods are produced and consumed evenly across the landscape: farmers markets are located in different areas around Los Angeles because locals are more likely to frequent their own community's market than a farmers market in a different area of the county. The reliance on a local population is a characteristic of a non-tradable good.

Another non-tradable characteristic of fresh food is that farmers market customers believe the food they are purchasing is "local". Because the food is grown and consumed in the same place, more value is given to that good. For example, this researcher believes that farmers growing food near Los Angeles can get a better price for their food if they sell at a farmers market in Los Angeles compared to if they ship their food elsewhere. Increasing export time diminishes the freshness of the food, its competitiveness in other markets, and therefore its price.

The value that consumers attach to food being grown locally is realized because of the perception that food from farmers markets is local. Most people do not think about local in miles; a concrete definition of what local is



*Rosa Leon at the Pine Street Products Booth at the Altadena Farmers' Market.
Photograph by Kelly Rytel, Altadena, Los Angeles, CA*

Artisanal goods produced in small batches are created by utilizing specialized knowledge to make products of a higher value compared to products created in the industrial food model.

Selling agricultural knowledge is another way vendors earn income. Free knowledge is often provided through informal conversations, email newsletters, and open houses.

not necessary for consumers to attach value to the good. Food picked in the morning for sale in the afternoon may be considered local. In this way, the food derives value from the freshness of the food and by serving a “home market” instead of an export market further away. So while the fresh food sold at the AFM is frequently imported from rural areas, value is derived because customers may not think of the food as an import, especially when the presence of the farmer at markets also contributes to the idea that the food can be considered local.

Altadena Farmers' Market Artisanal Food Vendors Serve both Home Markets and Export Markets

Because the artisanal goods studies are made in small batches with specialized knowledge, they can likely be classified into one of the three sectors of the New Economy that has seen high growth in the United States since the 1980s: the “craft goods” sector (the other two are the information technology sector and the financial services sector). The value in craft goods is derived from harnessing specific knowledge of that industry—value can be created either through knowing where to source

the best raw materials or from knowing how to produce the good differently using specialized equipment. The artisanal food vendors at the Altadena Farmers' Market utilize specialized knowledge to create a product that is worth more compared to goods produced within the industrial food system. These goods appeal to buyers in the home market because they are locally produced. However, additional value is derived because of the specialized knowledge of production or process; therefore these products also appeal to non-home markets. Based on interviews, artisanal vendors distribute through a wider variety of outlets, including online, to restaurants, and to retail stores across the United States.

Additional Income Derived from Selling Knowledge

Because most people do not know how to grow or process food, many vendors and food-related entities derive additional information from selling their knowledge to the public through classes. However, not all knowledge is marketed: there are many online food newsletters (including surveyed entities and others) that offer free information about various food related endeavors. For example, the Institute of Urban Ecology provides free information through their radio show. Most vendors and entities also answer questions from customers about their products at the market. Other businesses like Whisper Farms host open houses to inform the public about how they grow food. Activities that spread knowledge about aquaponics may enable others to grow food in the same manner. Anyone can learn about aquaponics online, but a face-to-face interaction with an active businessperson who utilizes aquaponics technology provides targeted information that is richer in detail.

While most individuals will offer free advice in interaction with customers or volunteers, income can be derived through specialty consultations. For example, Loretta Allison from Spade and Seed offers personal garden consultations for a fee. Other entities like Farmscape (not connected to Altadena Farmers' Market) provide garden design, con-



*Reies Flores at the Cityfarm Booth at the Altadena Farmers' Market.
Photograph by Kelly Rytel, Altadena, Los Angeles, CA*

Farmers markets can be a key mode of distribution for vendors, though goals of vendors and market managers may not always be aligned.

Community Supported Agriculture (CSA) is another model of distribution for urban agriculture. CSAs prepare boxes of produce for weekly delivery or pick-up.

struction, and consultations for a fee. The University of California Cooperative Extension hosts Master Gardeners Programs, usually for a fee. Various food-related classes are offered for a fee from various entities, including some in collaboration between Whittier Backyard Farms and the Institute of Urban Ecology.

Artisanal food producers also leverage their specific knowledge by giving classes about food processing. This is the successful business model utilized by the Institute of Domestic Technology, the Altadena Farmers' Market sponsor. Additionally, Sqirl Preserves classes include jam-making and Brassica and Brine's classes include sauerkraut-making. Classes about artisanal food-making are also offered through the UC Cooperative Extension, like their preserves class.

A third way to market specialized knowledge is through tourism. For example, Mariposa Creamery recently began hosting tourists on their farm for a fee.

Distribution Model

By selling at the farmers market, vendors are taking advantage of a distribution system outside the industrial agricultural system that was created decades ago. These vendors have a different business model and therefore it is unsurprising that they distribute their goods outside of grocery stores. Community Supported Agriculture (CSA) can also be considered an alternative distribution model. CSAs distribute boxes of produce on a weekly basis to their subscribed customers. Whittier Backyard Gardens and Muir Ranch sell through CSA boxes. For Muir Ranch, these models are not mutually exclusive, though they do serve different purposes. Muir Ranch distributes the edible produce they grow through the CSA boxes. However, Muir Ranch occasionally sells flowers at the AFM because this specific good delivers a higher margin than edible produce. Limited conclusions can be made based on the business model of Muir Ranch because it is not a for-profit private entity. As an educational entity, Muir Ranch serves as part of a food curriculum and also benefits from free labor, free land, and free water. These are major costs

for a for-profit entity.

This research reveals that the farmers market model of distribution offers many advantages to growers, market operators and sponsors, and the community. However, within this model of distribution, there can be some tension between the goals of farmers and the goals of market managers. First, backyard farmers who would like to sell their excess produce—the food they have leftover after distributing to family and friends—have approached the Altadena Farmers' Market with interest in selling. The AFM accepts sellers that cannot commit to a weekly presence at the market, but prefer a weekly commitment as customers rely on a consistent presence of vendors. Other farmers markets may have stricter requirements. Farmers who might not otherwise commit to a weekly presence often have to scale up their business to grow a certain amount of produce each week; however, most urban farmers at the AFM grow food specifically to sell commercially. Increasing the size of a farm or the rate of production translates to an increased time commitment at the farm or production site, which can conflict with the need to be present at a farmers market. Alternatively, if the farmers or producers need to stay at the production site, they can hire employees to be at the market; but this increases the costs of doing business. Even the term “farmers market” implies the presence of a farmer. The level of competing goals varies between markets and between vendors, depending on how many markets each farmer serves and how much market managers value the presence of the farmer.

Businesses with Zero or Marginal Land Costs Have an Advantage

Several businesses benefited from the free use of land and this researcher believes that this creates an advantage. The most prominent example is Muir Ranch. This entity farms on school land, paying nothing additional for costs of land. However, this model is not directly applicable for most for-profit ventures. If an entrepreneur is utilizing a yard they already own or rent, they are utilizing land at

Most entrepreneurs recieved help from family and friends.

This researcher found that one of the most striking features of those interviewed was the almost universal display of passion and enthusiasm.

a low marginal cost for the most party. The majority of urban agriculturists interviewed fit into this category. Part of the advantage of these urban growers is access to low-to-free land costs. Such an arrangement should be further investigated to learn how common this is among urban growers and how decisive a factor it is in current success.

In terms of owning land versus renting land, no determination of cost can be made. However, based on the conversation with Dr. Dan Drake of Drake Family Farms (producer of artisanal goat cheese), owning land is an advantage for securing credit. When Dr. Drake attempted to secure a small-business loan, he was unable to because he rents his dairy farm.

Proprietors Use Their Own Labor to Subsidize Costs

Most of the entrepreneurs interviewed by this researcher supplied most of the start-up labor themselves. The entrepreneurs' passion for produce and animals was a key motivating factor for many new urban agriculture entities. This researcher found that one of the most

striking features of those interviewed was the almost universal display of passion and enthusiasm. In getting their businesses started, most proprietors work long hours and do not include the price of their labor in profit calculations for their business. Many entrepreneurs exploit their own labor and ingenuity for an idea they believe in and this behavior is not exclusive to urban agriculture. If the proprietors' price of labor were taken into account, the profit margins for their businesses would be much lower, and often negative.

In addition, varying amounts of free labor were provided by family members, including spouses, siblings, and children; some labor from friends was also utilized. More often than not, this labor was in areas outside of the proprietor's agriculture specialty: for example, marketing advice, legal help, or construction services. Some entities utilized free volunteer labor.



*Aquaponically-grown lettuce at Whisper Farms.
Photograph by Kelly Rytel, Pasadena, CA*

This research was too limited in scope to conclude whether the industry of urban agriculture is agglomerating.

While the industrial model of agriculture arose to take advantage of internal economies of scale, alternate craft-based goods may benefit from locating near similar businesses to take advantage of external economies of scale.

Informal information about general business topics and roadblocks, agricultural news, expansion possibilities, and general business know-how can be freely exchanged between vendors at places like farmers markets.

Hotspot or Not? Applying the New Economic Geography

Based on the previous conclusions and the theories of the New Economic Geography, this researcher believes that because the industry of urban agriculture in Los Angeles is relatively new, no concrete conclusions can be made about the full potential of the industry to create economic growth.

Traditional economic theory would suggest that the urban agriculture industry may not be poised for growth because the current industrial food system creates high efficiency through economies of scale. Furthermore, the number of current jobs is modest (many ventures have zero paid employees) and the incomes of entrepreneurs are relatively low, often serving as secondary income. However, it is too early to tell whether the industry will grow, shrink, or stagnate. With higher demand for food and goods sold at farmers markets, the urban agriculture industry could grow and positively affect the labor force through higher pay and more jobs. Moretti (2012) discusses the high-growth, information-based sectors of our current economy, which include specialized knowledge like that being purveyed by the artisanal producers selling products at the AFM. Therefore, urban agriculture in Los Angeles has the potential to become an industry that benefits from the involvement of many for-profit urban agriculturists.

This research was too limited in scope to conclude whether the industry of urban agriculture is agglomerating. Based on NEG, it seems that vendors at the AFM operate on a combination of characteristics found in both non-tradable goods—especially fresh foods—and tradable goods—especially artisanal goods. Some benefits may be conferred from co-location of those creating tradable goods. Both fresh and artisanal goods have displayed characteristics of tradable goods. This leads to several questions about input sharing, labor matching, and learning.

This research produced limited evidence of input sharing of fresh foods. The observed

input-sharing took place within entities that distribute fresh food through CSA boxes, not through distribution at the AFM. This model was seen most clearly with Muir Ranch, which sources produce from urban and non-urban sources but also distributes the produce it grows through affiliate CSAs. Affiliate CSAs share aggregated produce from multiple farmers to provide customers with greater variety. This model allows Muir Ranch to concentrate on growing a few types of produce while other Affiliate CSAs concentrate on growing a few different varieties. In the end, both CSAs benefit by swapping their produce with each other. This is evidence of input-sharing and further evidence that fresh food has qualities of a tradable good.

Next, is there labor matching? Based on the interviews conducted, the labor pool still seems to be very small and no labor matching is evident. However, a build-up of specialized labor within industrial agglomerations takes time to form. Furthermore, industry agglomerations with high growth also have high wages, meaning they can attract even more labor into the labor pool.

Finally, is there evidence of learning? Based on the interviews conducted, there seems to be modest amounts of learning taking place between businesses. One artisanal goods producer described how they leverage specific techniques learned from previous employment. As the industry grows, there is potential for learning to take place between places of business. As stated earlier, farmers markets are a natural aggregator of goods by their nature and provide a venue for farmers to interact and talk about various production issues that they have in common. Knowledge about general business topics and roadblocks, agricultural news, expansion possibilities, and general know-how can be exchanged informally and freely. This informal learning can be very valuable in creating a specific atmosphere at a farmers market, even though specific knowledge about certain production methods may not be applicable to vendors selling different products.

Publicly disseminated knowledge may also help grow the size of the urban agriculture industry in Los Angeles, increasing the number of entrepreneurs and/or customers.

Many urban vendors at the Altadena Farmers' Market had never previously sold their goods commercially.

To understand the urban agriculture industry in Los Angeles, it may be instructive to further investigate and compare Los Angeles artisanal food products with another craft-based food industry to determine each area's unique features.

In addition to information sharing between businesses, information about growing techniques is being actively transferred to the public. This includes knowledge exchanges at paid classes and information disseminated for free at various events. If these knowledge transfers increase employment, then more information will be transferred to more employees, resulting in a virtuous cycle of knowledge sharing. Equipped with this knowledge, individuals may choose to start similar businesses based on the principles they learn. In this way, information exchange may grow the overall industry of urban agriculture, especially if distribution at new farmers markets taps into a new customer base.

Craft-based goods are an industry with high growth potential. Moretti (2012) explains how recently, information industries have experienced higher growth rates compared to other sectors of the economy. Can the artisanal foods created in Los Angeles be considered a craft good that utilizes specific information or technology? Again, because these goods are relatively new to the market, this research cannot conclude whether they are a craft good or not. While the potential may be present, these crafts may not have not developed very specific styles of production. For example, within the wine industry, many producers concentrate on producing a type of wine which is specific to their region. Each winery's product is a result of that specific climate, which grapes they grow, and the wine-making process itself. To understand the urban agriculture industry in Los Angeles, it may be instructive to further investigate and compare Los Angeles artisanal food products with another craft-based food industry to determine each area's unique features.

The Altadena Farmers' Market has grown in the past year. When the market was founded, most urban vendors had never sold their goods and some had not begun producing food. The increase in urban agriculturalist food producers may be attributed to a combination of community demand for local food and local government demand for a farmers market. The Altadena Farmers' Market came to be when

individuals from Loma Alta Park's managing entity, the County of Los Angeles Department of Parks and Recreation, approached the organizing entities of the informal urban farmers market at the Zane Grey Estate. Without the local government's interest, the Altadena Farmers' Market might not exist today; but without local community interest, local governments would not be as interested in organizing farmers markets around Los Angeles.

Based on the primary source data collected as part of this research and on a review of the urban agriculture industry as a whole, there is limited evidence of input sharing, no evidence of labor matching, and lots of evidence of learning. Evidence of urban agriculturalists producing craft-based, tradable goods is also limited. Therefore, this researcher cannot conclude if there is evidence of an industry agglomeration or a hotspot in Altadena.

RECOMMENDATIONS AND FUTURE RESEARCH

Because of the potential for urban agriculture to benefit from clustering and because there is visible demand at farmers markets for food produced outside the industrial agriculture model, this researcher believes that subsidies of the industry could be helpful to its growth. Subsidies for industries with high growth potential can lead to greater economic growth for the industries and the regions where the industries are located. Because the urban agriculture sector is made up of many small, entrepreneurial ventures, these subsidies would be theoretically similar to government loans that are already available to small business in other sectors of the economy. Loans for capital acquisition would benefit businesses which cannot currently get small business loans from local banks or from the government.

Eric Schlosser and Michael Pollan argue that even though the progressive food movement is currently elite, many social movements started off as elite and became the mainstream (Wagenvoord, 2004).

Currently the Hunger Action Los Angeles (HALA) market match program at the Altadena Farmers' Market doubles the value of EBT dollars. Mr. Shuldiner, the AFM market manager, calls this program "reverse engineering farm subsidies" because it ultimately also benefits the farmer through higher demand.

Subsidies to this sector could also promote equity. Urban agriculture is often more expensive because it provides a product of a higher quality, but this inhibits low-income customers from shopping at the market and participating in an alternative food system. If subsidies to urban agriculturalists are successful, then the price of their goods will be reduced and more people will be able to afford their items. The increases in demand caused by reduced prices would further stimulate growth of the industry. Some may argue that subsidies to urban farmers would only reinforce class privilege, but Eric Schlosser and Michael Pollan argue that even though the progressive food movement is currently elite, many social movements started off as elite and became the mainstream (Wagenvoord, 2004).

Current subsidies utilized by the Altadena Farmers' Market demonstrate ways to make food more affordable at farmers markets. The AFM applied for and was accepted into the Hunger Action Los Angeles (HALA) Market Match program. Using private funds, HALA provides vouchers to farmers markets that are located in areas with a minimum percentage of low-income residents. The vouchers are distributed to customers who shop with Electronic Benefit Transfer (EBT) dollars and double the value of the shoppers' EBT dollars. Qualified shoppers include those using CalFresh (also called food stamps), the Supplemental Nutrition Assistance Program, the Women, Infant, and Children food assistance program, and social security assistance (including regular payments, supplemental income, or disability payments). This subsidy creates supply-side demand and allows urban agriculturalists to earn market rate for their high-quality food products. Mr. Shuldiner, the AFM market manager, calls this program "reverse engineering farm subsidies" because it ultimately also benefits the farmer through higher demand.

Separately from subsidies, immediate assistance should be provided to farmers through training about basic business practices. Possible topics could include how to develop a business plan, exploring different

models of distribution, cost-benefit analyses of additional investments, positives and negatives of scaling up of a business, fundraising techniques for securing capital, and marketing skills.

Future Research

While this research focused on the economic possibilities of urban agriculture as an industry, food issues touch on numerous social, environmental, and equity issues, many of which have yet to be explored in Los Angeles. Based on this research, additional topics for research could include the following.

Additional investigation about the role of farmers markets

This could include research about the different philosophies of farmers markets in terms of food products (organic versus non-organic, definition of local) and the role of non-food products (other local businesses use farmers markets as a way to sell their products or services), as well as the sociological role that weekly farmers markets play in the community.

Additional investigation about the role of urban agriculture

For example, what effects do agriculture activities like gardening, urban homesteading, and informal urban markets have on communities at large?

Additional investigation into urban agriculture businesses in other areas of Los Angeles

Given the discrepancies in economic development levels of different areas of Los Angeles, what role do urban agriculture activities play in areas like south Los Angeles? How are economic development and growth different in different places? Why are for-profit companies more actively involved in urban agriculture in some areas of Los Angeles County and why are non-profit organizations more involved in urban agriculture in other areas?



*Egg-laying ducks at the Cityfarm.
Photograph by Kelly Rytel, Glassell Park, Los Angeles*

Economic research into the business models of rural organic farms

This could include research into medium-sized farmers that mostly distribute locally to restaurants, through wholesalers, or via various farmers markets. What benefits do rural organic farms achieve and how does their distribution model differ from urban farmers'?

Economic research into the business model of farmers market vendors who are aggregators

How do the business models of entities like Rice & Beans and Milk Man LA, which procure their products from many different businesses and sell at farmers markets, differ from those studied here?

How do other farmers markets work with socially-minded ventures? How and why do other food-related entities, like seed banks, food banks, foraging entities, and gleanng entities work with farmers markets?

CONCLUSION

Utilizing theories of New Economic Geography, urban agriculture entrepreneurs in Los Angeles engage in a wide variety of food growing and food processing. They operate outside of the industrial food system and therefore utilize a customized business model of production techniques, including a focus on quality and on alternative distribution techniques like Community Supported Agriculture boxes and farmers markets. Based on primary and secondary research focused on the Altadena Farmers' Market, the potential for economic growth in this industry is mixed and agglomeration cannot be positively demonstrated. However, if the urban agriculture industry grows and more data are collected, future research could provide more conclusive remarks on the economic potential of the industry.

**Errors from page 91: The Los Angeles Health Department did not contact the informal urban market; a zoning official contacted Ms. Putnam. Furthermore, the market was voluntarily shut down.*

A photograph of a school garden. In the foreground, there are several raised garden beds filled with various plants, including tall red flowers and leafy greens. In the background, three children are standing near a chain-link fence. One child is wearing a white shirt with a yellow bow, another is wearing a black shirt, and a third is wearing a colorful patterned hoodie. A large purple semi-transparent circle is overlaid on the right side of the image, containing the title text.

SCHOOL GARDENS

*Learning and
Growing*

What are the
benefits and challenges
of implementing
school garden programs?

School gardens may seem like a recent addition to most school landscapes but they have existed for more than a century across Los Angeles County and the United States. Benefits include improvements in academic performance, nutrition education, obesity prevention, civic engagement, and community enrichment. This chapter examines school gardens' historical context, their current state in Los Angeles County, and the successes and challenges of these programs.

"As cities become more and more congested, parents feel more strongly that their children should have greater opportunity for out-of-door exercise and first-hand contact with nature."

-Report of The
US Bureau of
Education, 1916

Cover photograph
by Genevieve
Hernandez, School
Garden, Los Angeles
County, CA

INTRODUCTION

The 1890s marked a strong national movement for gardening as part of public school education (Lawson, 2005). In 1889, officials built one of the city's first public schools, at the corner of East 7th Street and Wilson Street in downtown Los Angeles, between Alameda Street and the Los Angeles River. At the time, school gardening programs were considered a means to address a range of agendas relating to education, society, morality, recreation, and the environment. Children's garden programs received a wide range of support from teachers, government agencies, institutions, garden clubs, social reformers, and civic groups (Lawson, 2005). Even prominent figures like President Woodrow Wilson praised gardening and its contributions to children's health, education, and civic mindedness (Lawson,

2005). By 1906, the United States Department of Agriculture estimated there were over 75,000 school gardens in the country. In 1914, the Federal Bureau of Education established the Division of Home and School Gardening, and through this, gardening received official endorsement as an educational resource in school curricula (Lawson, 2005). At the time, agriculture and school gardening were given the same priority as math, language arts and sciences in schools.

During the same period in Los Angeles, Marie Aloysius Larkey was one of the first to establish a model for school gardening. In 1910, the Board of Education hired Larkey, who specialized in agricultural economy. She was subsequently appointed special teacher of agriculture in 1912 when the Board of Education established a fully equipped department for this work (Gray, 1913). In that capacity, she was able to transform more than 100 vacant lots into active school gardens (Gray, 1913). At



“This is one section of the horticultural group of the Gardena Agricultural High School in Los Angeles, a school designed to develop the character of boys and girls.”

Quote and image source: Gray, M.R. (1913) “The Education of Children in the School Gardens of Los Angeles”

The notion of collaborating with the community is evident in historic school gardens.

“It is interesting to note that the school garden was first started, and has taken firmest hold, in large cities. People feel the keenest desire for things when they have lost them.”

***-Report of The
US Bureau of
Education, 1916***

the time Los Angeles was a region rich in agriculture with vast expanses of orchards and fields, yet many people worked and lived in industrial settings such as the neighborhoods surrounding school sites.

Larkey’s efforts were especially significant as she spent most of her focus on the East 7th Street School site—a school where the majority of the students’ parents were blue-collar workers who did not own the homes in which they lived and had no gardens. The area was surrounded by planing mill factories, railways, and car barns. The 100 x 100 foot lot acquired for the first school garden site was ideal for teaching poor children how to transform a yard of their own and contribute to the beautification of Los Angeles (Gray, 1913).

The notion of collaborating with the community is evident in historic school gardens. Larkey enlisted the help of the Board of Education, Teachers, Women’s Clubs, volunteers, and press in order to clean up lots, collect supplies like seeds and plants, and organize a supply of water complete with an irrigation system (Gray, 1913). She, along with her working partner Merle Smith, a landscape

architect from Massachusetts, pioneered helping teachers and students recreate the 7th Street school gardening experience across various Los Angeles schools, thus expanding the school garden program into a county-wide phenomenon.

By 1913, thanks to Larkey’s movement, more than 70,000 students across the city tilled and sowed 150 formerly vacant lots (Gray, 1913). Teachers integrated garden study into a variety of curricula, including science, art and geometry. According to Gray’s account, teachers found gardening improved discipline in the classroom, developed children physically, created a love for work, and instilled a desire for a more attractive home.

In a School Art Magazine article from 1914, Mary Richards Gray discusses how to start a school garden. The article delves into detail ranging from garden design of above-grade flat boxes to tips on acquiring donations from community members when the school board isn’t able to provide all the necessary resources (Gray, 1914). The article also explains in depth how to organize a school garden through ground preparation, mapping the garden,

School gardens in California made a strong comeback in the 1990s. The California Department of Education, along with Delaine Eastin, then California State Superintendent of Public Instruction, launched the Garden in Every School initiative in 1995.

'Garden in Every School' State of California Initiatives:

1999 AB 1014
2001..... SB 19
2002..... AB 1634
2006. AB 1535
2012..... AB 2367

and cultivation and care of the school garden. Student involvement is a common theme.

By the late 1920s, school garden programs were in decline, though some survived through World War II. Seventh Street's school met an early end in 1914 when a water tower fire burned it down. Five years later, the city built a brick school and replaced the garden with a playground. Suburbanization and urban renewal schemes wiped out residential downtown and the school at 7th and Wilson (Watters, 2012). There is now another public school on the property.

A SCHOOL GARDEN IN EVERY SCHOOL

School gardens in California made a strong comeback in the 1990s. The California Department of Education, along with Delaine Eastin, then California State Superintendent of Public Instruction, launched the Garden in Every School initiative in 1995 (Agee, 2002). A series of bills to promote school gardens was enacted following the 1995 initiative. The Governor and State legislature acknowledged the value of school gardens as is evident through the following bills promoting instructional school gardens (California Department of Education, 2013):

- **Assembly Bill 1014**, Instructional School Gardens (1999) – establishes the instructional school garden program
- **Senate Bill 19**, The Pupil Health, Nutrition, and Achievement Act (2001) – identifies school gardens as one way to increase student preferences for fresh fruits and vegetables
- **Assembly Bill 1634**, Nutrition Education (2002) – further supports school gardens through identifying best practices and supporting a grant program
- **Assembly Bill 1535**, California Instructional School Garden Program (2006) – authorizes the California Department of Education to award \$15 million for grants to promote, develop, and sustain instructional school gardens

- **Assembly Bill 2367**, Bonilla School gardens: sale of produce (2012) – “The existing law establishes the Instructional School Gardens Program for the promotion, creation, and support of instructional school gardens. Under existing law, a school district, charter school, or county office of education may apply to the Superintendent of Public Instruction for funding for a 3-year grant in order to develop and maintain an instructional school garden. Existing law limits the grants to a maximum of \$2,500 per school-site, except as provided.

This bill would authorize a school district, charter school, or county office of education to sell produce grown in a school garden, regardless of whether the school participates in the Instructional School Gardens Program, if the school district, charter school, or county office of education complies with applicable federal, state, and local health and safety requirements for the production, processing, and distribution of the produce.

Furthermore, section 51798 was added to the Education Code, to read, 51798: A school district, charter school, or county office of education that is operating a school garden may sell produce grown in the school garden, regardless of whether the school participates in the Instructional School Gardens Program, if the school district, charter school, or county office of education complies with applicable federal, state, and local health and safety requirements for the production, processing, and distribution of the produce.” (Legislative Counsel, 2011)

Today, the California School Garden Network—an organization comprised of state agencies, private companies, educational institutions, and non-profit organizations dedicated to the mission of creating and sustaining gardens—provides a comprehen-

“Students make connections to the real world. School gardens allow students to understand the whole natural ecology system.”

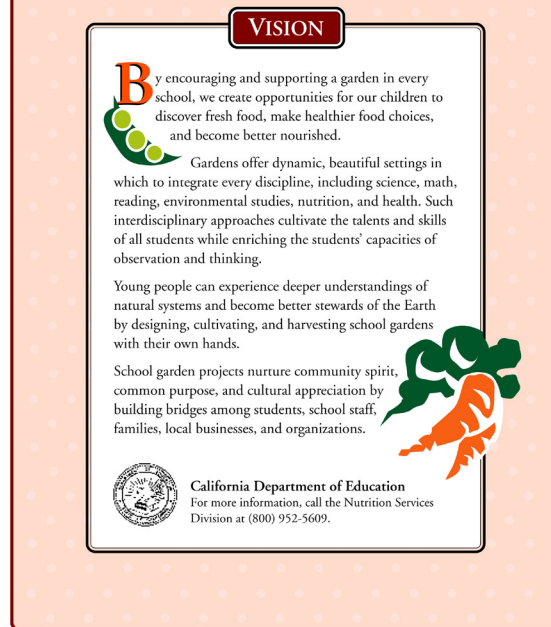
-Master Gardener
in West Los Angeles,

April 18, 2013

What are the benefits of having school garden programs in schools?

What are some of the challenges in creating and sustaining school gardens in Los Angeles County?

“A Garden in Every School”



School Garden Mission Statement

Source: California Department of Education

sive definition of a school garden:

“...a school garden is an innovative teaching tool and strategy that lets educators incorporate hands-on activities in a diversity of interdisciplinary, standards-based lessons. The garden engages students by providing a dynamic environment in which to observe, discover, experiment, nurture, and learn. It is a living laboratory where lessons are drawn from real-life experiences rather than textbook examples, allowing students to become active participants in the learning process. Through the garden, students gain an understanding of ecosystems, an appreciation for food origins and nutrition, and knowledge of plant and animal life cycles. At the same time, they learn practical horticultural skills that last a lifetime.”

- California School Garden Network, 2006

RESEARCH

This research focused on answering two questions: First, “What are the benefits of having school garden programs in schools?” And second, “What are some of the challenges in creating and sustaining school gardens in Los Angeles County?”

LITERATURE REVIEW

Many claims about the benefits of school gardens are made in the existing literature. School gardens provide a learning environment where children learn about nutrition and health, which is thought to buffer children against the current obesity epidemic in the United States caused by poor dietary patterns, sedentary lifestyles, and other unhealthful behaviors (McAleese & Rankin, 2007). Furthermore, research shows that eating patterns, and especially food choices relating to the consumption of fruits and vegetables, are developed at an early age (Kirby 1995). In this respect, school gardens and the educational opportunities around them can benefit the health and academic performance of children.

Numerous studies have demonstrated the nutritional benefits of school gardens. School gardens have a positive effect on children's vegetable consumption (Ratcliffe et al., 2011). Results from this study not only indicated a positive impact on children's vegetable consumption but also an improved recognition of, attitude for, preference of, and willingness to taste vegetables (Ratcliffe et al., 2011). Graham et al. (2005) found that school gardens can positively impact children's food choices by improving their preferences for vegetables and increasing their nutritional knowledge. In another study, children in Detroit learned about the nutritional value of particular vegetables and how to grow vegetables to take home, and also ate healthy snacks from a school garden (Pothukuchi, 2004). After one year, the study documented increased interest among the children in eating fruits and vegetables. Recent studies have examined the combination of direct instruction and hands-on school gardening activities as methods of

influencing students' attitudes about fruits and vegetables, demonstrating increases in children's knowledge of and preference for fruits and vegetables (Morris et al., 2002).

It is critical to the long-term health and well-being of children that we find ways to increase their consumption of fresh fruits and vegetables because their consumption plays an important role in the prevention of cancer and heart disease, and decreases risk factors for many other chronic diseases. Proper adolescent nutrition has been shown to reduce the risk of obesity and diet-related diseases later in life (McAleese & Rankin, 2007). Additionally, the literature points to the importance for the health and well-being of children in finding ways to encourage their consumption of fresh fruits and vegetables (McAleese & Rankin, 2007).

In addition to encouraging a healthier diet, school gardens and garden-based education improve academic performance and may lead

to higher test scores (Klemmer et al., 2005; Dirks & Orvis, 2005). Some of the strongest academic gains appear to be in the areas of math and science, and overall improvement on standardized test scores (Lieberman & Hoody, 1998; Klemmer et al., 2005). Research also confirms that garden-based educational programs can positively impact the learning environment and student attitudes toward learning, resulting in increased attention and enthusiasm for the educational process and educational engagement.

Another study assessed school teachers' perceived attitudes and barriers associated with school gardens, as well as the purpose and use of gardens in schools, specifically in relation to the link between gardens and nutrition. Teachers perceived the garden as somewhat to very effective at enhancing academic performance, physical activity, language arts, and healthful eating habits. This research provides support for standards-based curri-



*Plants and Vegetation in a School Garden in Los Angeles County
Photograph by Genevieve Hernandez, Los Angeles, CA*

“Participants in a school garden program in California experienced significant gains in overall GPA in math and science, and improvement on a standardized psychosocial questionnaire.”

-Murphy, et al.,
2003



*Scarecrow in a School Garden in Los Angeles County
Photograph by Genevieve Hernandez, Los Angeles, CA*

cula materials and teacher training related to gardening and nutrition (Graham et al., 2005). Science achievement of students who participated in a hands-on or experiential gardening program was higher than that of students who only engaged in classroom curriculum (Klemmer et al., 2005). Furthermore, participants in a school garden program in California experienced significant gains in overall GPA in math and science, and improvement on a standardized psychosocial questionnaire (Murphy & Schweers, 2003).

Garden-based learning was also associated with increased scores in science achievement tests in a controlled study where weekly usage of a school garden helped to increase science achievement test scores (Smith & Motsenbocker, 2005). A broad study of 40 schools from across the U.S. shows that environment-based education curricula result in better performance on standardized achievement tests (Lieberman & Hoody, 1998). Other research has shown that involvement with school nature areas is associated with improved academic performance and involvement with Junior Master Gardener's results in gains in academic knowledge in science,

horticulture, and environment (Dirks & Orvis, 2005).

METHODOLOGY

In order to fully understand the challenges that exist in creating and maintaining school gardens, this researcher conducted site visits at schools throughout Los Angeles County. The primary motivation of the research was to meet individuals who were familiar with school gardens and who interact with school gardens regularly. The first step in the research process was to obtain a list of individuals who met that criteria through the University of California's Cooperative Extension (UCCE-Los Angeles)—whose mission includes improving nutrition, increasing access to fresh low-cost produce, offering gardening education, building bridges between neighbors and communities, helping to create employment opportunities, and encouraging a cleaner, greener Los Angeles. The list was comprised of teachers, volunteers, and individuals who had completed or were familiar with the Common Grounds Master Gardener Program—a program sponsored by UCCE-LA to enable those interested in gardening to become skilled gardeners



*Flowers and Broccoli Growing in a School Garden
Photograph by Genevieve Hernandez, Los Angeles, CA*

and to aid and mentor the community. This researcher successfully scheduled school garden visits in West Los Angeles, Mid-City Los Angeles, Alhambra, Long Beach, Southeast Los Angeles, Mar Vista, and Pasadena.

The site visits consisted of open-ended questions to volunteers and teachers involved with the school garden. Responses included ideas such as perceived benefits of school gardens, the role of school administrators, community participation and collaboration, sources of funding, accomplishments, and major challenges. Site visits were followed by walk-throughs of the school gardens. The end result was an informational exchange with experienced school gardeners and a detailed account of their challenges and accomplishments. To protect the individual schools and respondents, this research does not provide any identifying information of the schools visited.

FINDINGS

The school gardens visited throughout Los Angeles County varied in size from a 15 x 10 foot lot to a garden of almost two acres. The school gardens varied by type as well, ranging from edible and non-edible school gardens to instructional school gardens and literacy gardens. The length of existence of the gardens varied from two years to 11 years. The

school gardens visited were primarily elementary schools, although the researcher visited one middle school and one high school.

A central theme was consistently raised during each visit; informants felt strongly positive about the academic benefits of school gardens. Many believed school gardens to be an essential physical component of the school landscape, and not only as an aesthetic feature, but also as essential to the students' learning experience. Respondents also stated the importance of having the school administration's full support of the school garden project in order for it to be truly successful. The issue of adequate funding was another important theme and many school gardens had developed creative ways to raise funds. Another key theme emerged regarding the importance of collaboration with the community. Finally, as respondents discussed some of the challenges they faced, they overwhelmingly agreed that most of these challenges could be overcome.

Children Benefit from School Gardens

All interview subjects believed school gardens to be beneficial academically to their students. School gardens were unanimously viewed as an environment with possibilities to integrate all types of lessons, including math, science, language arts, and nutrition. As one respondent stated, "the students make connections to the real world. School gardens allow students to understand the whole natural ecology system. Lessons relate to every class ranging from science, math and nutrition. Here the students do everything beginning with the layout and plotting of the garden to calculating when things will be fully grown and ready for harvest." Another respondent stated that school gardens have the potential to treat nature-deficit disorder (Louv, 2005). She expressed her belief that students are better behaved when they have access to the garden and nature; they become more aware of their environment and develop respect for their surroundings and peers.

“School gardens have the ability of exposing children to nutritious food they otherwise may not have access to, especially in inner-city areas or environments characterized by high poverty rates.”

-Anonymous
Survey
Respondent



Chicken Coop in a School Garden

Photograph by Genevieve Hernandez, Los Angeles, CA

The link between school gardens and nutrition education was another theme respondents talked about during the interviews. Respondents mentioned children taking their findings outside the classroom and incorporating them into their daily lives at home. Children become educated about vegetable and fruit intake, and some students start their own gardens at home. As one respondent stated, “school gardens have the ability of exposing children to nutritious food they otherwise may not have access to, especially in inner-city areas or environments characterized by high poverty rates.” Again, respondents repeatedly emphasized the educational benefits of school gardens. Furthermore, the majority of respondents expressed the need for school gardens to become permanently integrated as part of the school curriculum.

The Role of School Administrators

Another prominent theme among the respondents was the importance of having the support of school administrators like the principal and teachers. Respondents mentioned various approaches taken on by school principals, from very permissive to stricter

approaches. In many cases, the more permissive approach was favored by the respondents as it allowed them more flexibility and freedom to work with the gardens. Similarly, teacher support was also mentioned as important, but school garden organizers did not believe teachers necessarily had to dedicate a large portion of their time to the gardens, preferring instead to have a school garden organizer present, as teachers already have “a lot on their plate,” as one respondent put it. All but two of the respondents mentioned the importance of having a funded position for a full-time school garden employee to tend to the garden and organize school lessons. One respondent mentioned that as long as teachers want to bring their students out into the garden, the school garden organizers can take care of integrating school lessons and any academic follow-up pertaining to the garden.

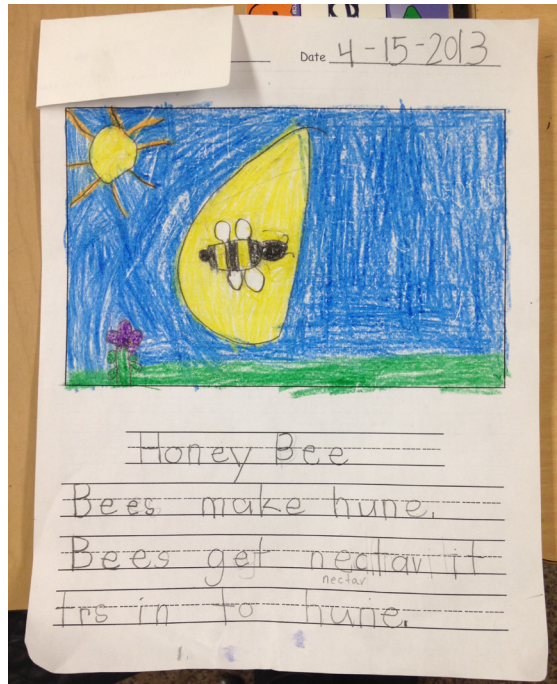
Funding

Raising funds was a central issue for all school gardens visited. All of the respondents had creative solutions to this problem. Many of them engaged in online research to find organizations to support their school gardens.

Raising funds was a central issue for all school gardens visited.

Community involvement and collaboration were priorities raised during the school garden discussions.

Many leaders of the school gardens had trouble getting requests approved through the school district facilities or management center to oversee structural and other school garden developments.



Student Artwork

Photograph by Genevieve Hernandez, Los Angeles, CA

They found that local utilities such as the Los Angeles Department of Water and Power often have money set aside for school projects. One school acquired a grant from the local electricity provider. Another school acquired money though the City of Los Angeles, which at the time had a Community Beautification Grant award program for community groups to fund neighborhood projects. Another school received funding, as well as a starter kit, from the American Heart Association. Not all donations came in the form of a check; in-kind services and materials like plants and soil were also gathered through reaching out to local and regional businesses. Two schools had materials donated to create an outdoor seating area for the children for outdoor lessons and as a formal sitting area for events.

Community Collaboration

Community involvement and collaboration were priorities raised during the school garden discussions. In all cases, school gardens were created with the help of a core group of dedicated people. In many cases, school garden organizers had been part of the UCCE Master Gardener's program. All of the school

gardens depended on some sort of collaboration with community members, parents, businesses and/or community volunteers. Respondents reported that these collaborators were important in helping maintain the school gardens, especially in the absence of full-time volunteers. In many cases, schools had "work days" about once a month, which consisted of gathering volunteers to pull weeds, help with harvesting vegetables, pick flowers to make flower arrangements, and prepare for events taking place at the school gardens. Having a core group of volunteers was also crucial as it establishes a base of available and coordinated workers. Without the support of constant, reliable volunteers, the school gardens are at risk of deteriorating. Community collaboration often presents in the form of art as well. One of the schools had a mural painted by a well-known local artist. At another school garden, a local artist came to the school to help facilitate a mosaic-making workshop after an incident of vandalism occurred.

Challenges

All but one of the school gardens visited mentioned a lack of information regarding resources from their corresponding school districts. Many leaders of the school gardens had trouble getting requests approved through the school district facilities or management center to oversee structural and other school garden developments. One school needed help building a tool and storage shed for their school garden equipment. As the school was low on funds, a local architect offered to help with the construction of the building and offered to provide materials as well. Due to guidelines and building codes schools must follow, it was difficult to get the building approved, and although the structure was built, the total time for completing this project was increased.

Two schools required soil testing to determine whether there were contaminants in the soil before they were able to proceed with building gardens. In one case the school district proposed a soil testing service which was expensive, causing the school to



Chicken Coop in a School Garden
Photograph by Genevieve Hernandez, Los Angeles, CA

contract with an outside service which was much cheaper. However, the outside soil testing service was not approved by the school district, and although it determined the soil to be in good enough condition to support a garden, the school district did not officially sanction the garden. Similarly, two schools in Los Angeles County were each offered a chicken for their gardens, but the school districts pertaining to each school prohibited chickens on school property. Both school gardens' sponsors decided to proceed with the housing of the chickens as their students were extremely enthusiastic with their new school garden mascots. Since the adoption of the chickens, the schools have had no problems with school district officials. A similar occurrence happened with wall art, when a mural was not approved by the local school district facilities management. The mural was a gift from a local artist to the school.

Funding, finding volunteers, and finding funding for volunteers are also challenges

schools face. In many cases, volunteers are in some way connected to a particular school because their child attends the school. As time goes on, and the child moves on to a different school, so does the volunteer connected to that child. As mentioned earlier, the school garden is dependent on having a core group of volunteers in order to continue operating. Maintaining a continued source of funding is also a challenge, as most money comes from donations or grants that are not supplied on a regular basis.

ANALYSIS

Based on respondents' experiences with school gardens, there are issues with school district policies related to school gardens. Respondents felt that school districts were not always up to date with the needs of each particular school, and in many cases school garden organizers felt the school district acted as a deterrent to innovative projects. Furthermore, school garden organizers were not fully

More connectivity and collaboration between school districts and school garden sites is needed.

While schools with school gardens want to incorporate the gardens into the curriculum, obstacles include a lack of time, money, and resources.

Access to resources integrating curriculum with the garden is important, and although there are a variety of organizations providing guidance, permanently established curricula set in place by the district or board of education would be a useful complement.

informed by district-level guidelines related to implementing garden projects. As districts are preoccupied with a multitude of projects, school garden projects were not perceived to be a priority. Based on information from the interviews, developing school gardens is a behind the scenes activity. More connectivity and collaboration between school districts and school garden sites are needed.

While schools with school gardens want to incorporate the gardens into the curriculum, obstacles include a lack of time, money, and resources. Although school gardens provide a perfect environment to integrate a wide-range of lessons from math, language arts, science, nutrition, and more, teachers lack the time to integrate garden lessons with curricula which is required to be taught in the classroom. Furthermore, in order to have the opportunity to establish a school garden curriculum, it is important to have a well-established garden in place. The funding to provide a well-established garden can be difficult to acquire. Lastly, access to resources integrating curricula with

the garden is important, and although there are a variety of organizations providing guidance, permanently established curricula set in place by the district or board of education would be a useful complement.

Resources

The following organizations provide information for those interested in getting involved with school gardens. These resources were provided by the respondents of the school gardens visited. The information ranges from tips on how to create and sustain a school garden to information on how to integrate curriculum into the school garden.

University of California Cooperative Extension, Los Angeles County (UCCE-LA)

UCCLE provides support for Los Angeles County school gardens through the Common Ground Garden Program, a program which provides access to gardening to Los Ange-



*Planter Box in a School Garden in Los Angeles County
Photograph by Genevieve Hernandez, Los Angeles, CA*

School Garden Resources :

University of California Cooperative Extension, Los Angeles County (UCCE-LA)

Garden School Foundation (GSF)

California School Garden Network (CSGN)

Life Lab

les county residents, particularly low-income families. The program aims to improve nutrition, increase access to fresh produce, offer gardening education, build bridges between neighbors and communities, help create employment opportunities, and encourage a cleaner, greener Los Angeles (Regents of the University of California, 2013). The UCCE-LA also helps residents of underserved communities learn how to grow their own food by providing free gardening workshops and technical expertise to hundreds of school gardens throughout Los Angeles County (Regents of the University of California, 2013).

Garden School Foundation (GSF)

GSF is an organization dedicated to providing an interdisciplinary program of education through garden-based learning in outdoor living classrooms. GSF developed a garden-based education program at 24th Street Elementary School in the West Los Angeles that includes monthly, standards-based lessons that focus on a unique subject in each grade ranging from kindergarten to 5th grade (Garden School Foundation, 2013).

California School Garden Network (CSGN)

CSGN is an organization comprised of state agencies, private companies, educational institutions, and non-profit organizations dedicated to the mission of creating and sustaining gardens. The CSGN offers lessons and curricula and nutrition resources as well as information about funding for school gardens. They also provide a comprehensive guidebook called "Gardens for Learning," geared towards teaching those who are interested in using gardens in schools and other community settings (Western Growers, 2013).

Life Lab

Life Lab is a nonprofit organization dedicated to the garden-based learning movement. They provide a wide range of curricula and workshops for educators interested in garden-based learning for students of all ages (Life Lab Science Program, 2013).

RECOMMENDATIONS AND FUTURE RESEARCH

School gardens are not a recent phenomenon in Los Angeles. They have been in existence since the early 1900s and the California Department of Education has been advocating for school gardens since the early 1990s. In Los Angeles County, the approximately 700 school gardens in existence are evidence of the popularity and success of the concept. However, in order to fully provide the stated benefits to their students, a clear and concise programming effort for school gardens must be set in place. Having a permanently set curriculum integrated with school gardens would help with those efforts. As the UCCE has been an advocate for school gardens, and actively involved in school garden projects, they are in an advantageous position to assume this role. At the same time, districts must be encouraged to become more involved and to create fully funded positions for school garden organizers.

Permanently Integrate School Garden Curricula in Schools

Beginning in 2008, The Garden School Foundation (GSF) launched a standards-based science, history, nutrition, and cooking curricula in collaboration with the Los Angeles Unified School District. The instruction implemented is a Kindergarten through 5th grade California state standards-based garden curriculum incorporating science, math, literacy, and nutrition. The curriculum includes a six-week cycle of planting, experimenting, harvesting, and eating. The Garden School Foundation's actions are an example of what can happen with a curriculum integrated approach to school gardens and can serve as a model for other organizations looking to integrate school garden curricula into their schools.

Encouraging districts to create full-time paid positions for school garden instructors and organizers is another way of ensuring the permanence of school gardens.

Establish Full-time Paid School Garden Organizer Positions

Encouraging districts to create full-time paid positions for school garden instructors and organizers is another way of ensuring the permanence of school gardens. As mentioned in the respondent testimonies, school gardens run the risk of being very short-lived if there is no core, dedicated individual managing the garden. To avoid the risk of having parents and volunteers abandon gardens once they no longer feel a connection to service them, having a fully funded and paid individual managing the garden would help assure maintenance and longevity. A school garden organizer would be in charge of coordinating volunteers and reaching out to the public as well as coordinating with administrators such as the principal and teachers.

As public schools are suffering from severe budget cuts, a great alternative to a district funded position would be to create an organization to fund and find grants to fund full-time school garden organizer positions. There are several organizations that fund coordinators to serve gardens in other parts of the region. The UCCE could play a significant role in creating this type of project as they have the knowledge of school gardens and access to many potential participants and supporters through their extensive social network. Examples of these types of organizations include The D.C. Healthy Schools Act, which the Washington, D.C. City Council unanimously endorsed and has provided nearly \$6 million in soda tax revenue to D.C. district schools. In addition to improving school meals and physical education, the act allows the District to provide \$10,000 stipends to schools for gardens and garden coordinators, and to hire one district-wide School Garden Specialist.

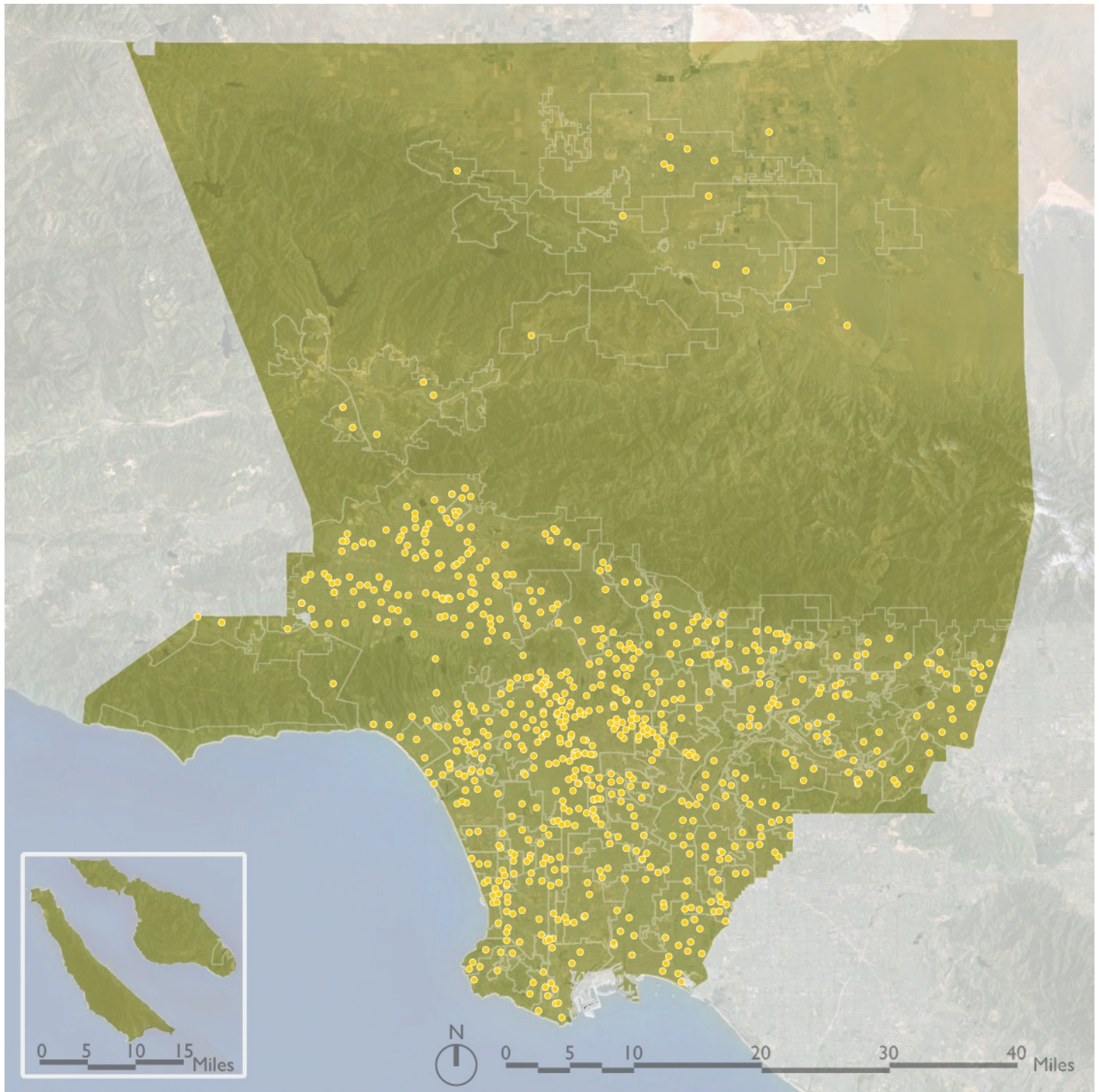
The Santa Cruz City Schools Parcel Tax is another example. A committee created a list of recommended jobs and programs, including garden coordinator positions. The school board adopted these recommendations and the voters passed a nine-year parcel tax, which now funds garden coordinators in all

four elementary schools in the school district for 20 hours per week plus benefits (Life Lab, 2012). Education Outside, a San Francisco-based organization, has helped secure nearly \$14 million in bond funding for the development of green schoolyards in 84 San Francisco public schools. The organization funds green schoolyard installation, teacher trainings, and a service corps program (Education Outside 2013).

CONCLUSION

There are over 700 school gardens in Los Angeles County today (see map at end of section) which present over 700 opportunities to reach out to children in nutrition education and enhance their learning experiences in school. School gardens provide a multitude of benefits and an innovative way of engaging and teaching today's generation. The school garden visits conducted in West Los Angeles, Mid-City Los Angeles, Alhambra, Long Beach, Southeast Los Angeles, Mar Vista, and Pasadena provided valuable information regarding the academic benefits of school gardens, the issue of adequate funding, and the notion of collaboration with the community. Interviews and visits corroborated many of the benefits discussed in the urban agriculture literature. Having a permanently set curriculum integrated with school gardens would help with those efforts. As the UCCE has been an advocate for school gardens, and actively involved in school garden projects, they are in an advantageous position to assume a leadership role. Similarly, the GSF, with their extensive knowledge of garden-based curriculum can provide valuable resources. This research concludes that districts must be encouraged to become more involved in providing assistance to schools. Furthermore, a fully funded school garden coordinator or organizer position is needed to allow school garden sites to operate to their full potential.

SCHOOL GARDENS IN LOS ANGELES COUNTY



LEGEND

- School Garden
- Los Angeles County

*Base map source: Esri; data collected by researchers -
see Mapping Urban Agriculture Appendix
for detailed sources*



DISTRIBUTION STRATEGIES FOR URBAN FARMERS

How do urban
growers distribute
their products?

In an effort to better understand the role of goods movement in urban agriculture, researchers conducted interviews with various for-profit urban growers in Los Angeles County, as well as community supported agriculture (CSA), third-party distributors, grocers, and restaurants. For the most part, urban agriculturalists' distribution methods are individualized and disconnected. However, potential exists for the establishment of a more comprehensive network between urban growers, wholesalers, and retail outlets.

How do urban growers distribute their products?

What, if any, distribution networks are available for these small-scale growers?

Cover photograph by
Kelly Rytel,
Heath & Lejeune,
Commerce, CA

INTRODUCTION

Technological advances in food transportation and processing have enabled distributors to move food faster and over longer distances than ever before. Food distributors and processors—middlemen responsible for getting food from farm to wholesaler—have consolidated, resulting in larger facilities catering to mega-retailers. Yet, outside of the industrial food system and the transportation network of freeways and eighteen-wheeler trucks, there exists a burgeoning urban agriculture scene.

Just like any industry, urban agriculture has a unique distribution network. Large-scale agriculture and its distribution methods do not work for urban agriculturalists, who may have small amounts of product, be located far away from transportation networks, and wish

to preserve the local identity of their food (USDA, 2010). Urban growers have established their own distribution networks, transporting their products to farmers markets, farm stands, and other retail outlets.

RESEARCH

Prior to this project, no research or data existed regarding the distribution methods utilized by small urban farmers in Los Angeles County. The research presented in this chapter investigated distribution as it relates to urban agriculture and sought to uncover nuances and trends.

Researchers focused on two questions: “How do urban growers distribute their products?” And: “What, if any, distribution networks are available for these small-scale growers?”

“Multiple models of distribution are needed to meet institutional food purchasing needs as well as scale up local food distribution efforts in Southern California.”

- Zajfen (2008)

LITERATURE REVIEW

Los Angeles County's agricultural production trends follow national and regional trends: on a national scale, a reduced number of large-scale farms make up an increasing share of food production, forcing out or incorporating small and mid-scale producers (LAFPC, 2012). In Southern California, available farmland in the region recently decreased by 10% over a five-year period (LAFPC, 2012). Similarly, in Los Angeles County, land available for agricultural production is diminishing and the gross value of agricultural crops and commodities produced in the county is declining (LAFPC, 2012).

While Los Angeles County has a declining agricultural production system, implementing alternative distribution methods that connect urban agriculture to local residents is one way to transform the county's food system (Zajfen, 2008). In particular, the Center for Food and Justice at the Urban Environmental Policy Institute at Occidental College (CFJ) found that “in order to deliver fresh and healthy foods... there needs to be a change in our traditional system of food delivery and a significant effort needs to be directed towards the development of alternative food production and delivery systems” (Zajfen, 2008). The industrial food system in the United States relies upon economies of scale, strict regulation, and generic descriptions to pack, process, and track large volumes of products in a standardized manner. While this assures that food is plentiful, cheap, safe, and varied for a majority of the population, the methods that promote efficiency in the food distribution system homogenize products and inhibit the flow of information on how, where, and by whom the food was grown or raised (Thompson et al., 2008).

DISTRIBUTION SYSTEMS AND MODELS

The term food distribution comprises the transport, storage, and marketing of food

products to consumers (Unger & Wooten, 2006). There are numerous types of agricultural distribution systems including: large produce firms; smaller produce firms; shipping firms; farms direct; farmers markets and farmers markets associations; community supported agriculture; and ready-made school lunches (Zajfen, 2008). Writers at CFJ support this: “Multiple models of distribution are needed to meet institutional food purchasing needs as well as scale up local food distribution efforts in Southern California” (Zajfen, 2008).

The United States Department of Agriculture (USDA) has researched and compiled the best practices from a variety of direct distribution models. Specifically, its research focused on a number of distribution models (retail driven, non-profit driven, producer driven and consumer driven) ranging by stage of development (start-up, developing, developed) (USDA, 2010). The best practice case studies come from businesses in diverse geographic locations throughout the U.S. such as New Mexico, Wisconsin, California, Virginia, Oklahoma, Florida, and Maine. One of the main challenges for most distribution models was transporting food to distribution centers. While all of the models provided examples of direct, collaborative distribution efforts, the USDA does not discuss urban agriculture specifically and focuses instead on what it calls “local” food supply and demand.

According to the Center for Food and Justice, particular factors that limit changes in the conventional food system include domestic food and farm policies, the concentration of power among large growers and producers, and unequal access to food (Zajfen, 2008). There are several other factors that prevent agricultural businesses from expanding their programs to different food buying systems, including:

- The high cost of purchasing local foods
- The high cost of fuel
- Low institutional food budgets
- Perishability of fresh food

- Limited staff to implement local food programs
- Limited understanding of institutional markets and food buyers' needs
- Customer base uneducated about local food
- Working within and against the conventional food system

INTEGRATING THE URBAN AGRICULTURE SECTOR VIA DIRECT DISTRIBUTION

The Los Angeles Food Policy Council (LAFPC) identified several ways that redefining the agricultural distribution system in the county can contribute to connecting local growers and consumers. Some of the LAFPC's high-priority projects include:

- Adopt a model for local, healthy, and sustainable food procurement policies by public agencies, schools, hospitals, restaurants and other institutions.
- Create healthy food neighborhoods through a coordinated place-based strategy that connects multiple projects and food assets together to transform food environments in underserved communities.
- Develop a Regional Food Hub enterprise to connect small and mid-sized local growers to underserved urban communities (Barham et al., 2012).

All three high-priority projects incorporate aspects of redefining distribution patterns within the county.

Like the LAFPC, many researchers have proposed "food hubs" as a way to bridge the gap between local growers and local consumers. According to the USDA, a "regional food hub" consists of "a centrally located facility

with a business management structure facilitating the aggregation, storage, processing, distribution, and/or marketing of locally and regionally produced food products." Clearly, regional food hubs are integral parts of local food distribution networks because they bring together resources for delivering locally or regionally grown food to areas with high demand for fresh food.

Regional food hubs have other important benefits for the communities of the growers and farmers that utilize them, as well as for the communities receiving produce. The food hubs provide expanded market opportunities for agricultural producers, catalyze job creation in rural areas, and increase access of fresh and healthy foods to consumers. Moreover, by delivering fresh and healthy food to consumers, there is a "strong potential to reach underserved areas and food deserts" (USDA, 2010).

The USDA further distinguishes between "food hubs" and "healthy food hubs," which it defines as "a variety of fully integrated businesses, social services, and safe public spaces that mutually support each other in ways that leverage profitability and long-term sustainability in innovative ways" (USDA, 2010). One of the many possible "healthy food hub" services is to support a "community garden and agricultural micro-enterprise project planning" (USDA, 2010). In this capacity, the "healthy food hub," if it were located in an urban area, would provide a facilitation space for urban agriculture. In the context of a "healthy food hub," there is a connection to urban agriculture in local schools with education and incentive programs in elementary and middle schools (USDA, 2010). This connection demonstrates that there is a demand for fostering urban agriculture for educational purposes (see School Gardens chapter for more evidence). A role for "healthy food hubs" could be to help acquire land for urban agriculture enterprises and school gardens.

The definition of “local” or “regional” differs greatly from popular definitions of urban agriculture.

LOCAL VERSUS URBAN

While the idea of integrating urban agriculture into Los Angeles County’s larger food system is promising, definitions of “local” and “regional” are vague throughout the literature. Moreover, the ambiguity makes it difficult to discern if a food hub or another alternative food distribution system would promote urban agriculture specifically, or just local and regional agriculture. For example, the LAFPC defines the Los Angeles County Regional Food System as spanning 200 miles throughout 10 counties with over 22 million people (Barham et al., 2012). On their website, the LAFPC similarly defines Los Angeles’ foodshed as a 200-mile radius around the city’s urban core. The definition of “local” or “regional” (often used synonymously) differs greatly from popular definitions of urban agriculture, such as the APA definition referenced in the introduction of this report:

Urban agriculture entails the production of food for personal consumption, education, donation, or sale and includes associated physical and organizational infrastructure, policies, and programs within urban, suburban, and rural built environments. From community and school gardens to rooftop gardens and bee-keeping operations in built-out cities, urban agriculture exists in multiple forms and for multiple purposes (Hodgson et al., 2011)

It is also important to note that food consumed by residents of Los Angeles County is grown on a local, regional, and statewide level, and is also consumed throughout the entire United States. Since the 1860s, when the Southern Pacific Railroad opened up the Golden State to the markets of the East, there has been a nationwide hunger for California’s produce (Orsi, 1975). According to the California Department of Food and Agriculture, “U.S. consumers regularly purchase several crops produced solely in California” (2013). Moreover, California currently produces over 400 agricultural commodities and, in particular, produces close to half of all fruits, nuts and vegetables grown in the U.S. (CDFA, 2013).

Because of the lack of specificity about the definitions of “local” and “regional,” the reviewed literature also neglects to mention how urban farmers and growers can benefit from food hubs or alternative food distribution systems. Additionally, while food hubs strive to inform consumers about where their food comes from, they do not explain mechanisms for educating consumers about the differences between urban and rural agriculture. Future researchers, the grower and distributor sectors, trade associations, and food advocates should develop standard definitions of local and regional, as well as clear distinctions between local and urban agricultural production.

METHODOLOGY

The research team conducted a series of interviews with urban growers, distributors, grocery markets, and local restaurants in order to gather data about distribution models for urban agriculture. To narrow the focus of the study, the researchers only contacted urban agriculturalists who produced their food within Los Angeles County. Although there are urban agriculture endeavors which produce and distribute food to the Southern California region in neighboring counties such as Ventura County, Santa Barbara County and San Bernardino County, they were outside the purview of this project.

Whenever possible, interviews were conducted in person at the particular site of interest. However, due to scheduling requests and travel restraints, some interviews were conducted over the phone or via email. Researchers originally considered creating a mass electronic survey, but ultimately decided against it due to institutional constraints. With no previous data or research available on distribution methods for urban farmers in Los Angeles County, the research team had little guidance on specific questions to ask. Instead, the research opted for an open-ended dialogue approach rather than a question-and-answer survey or session. The three questions

researchers attempted to tease out in their interviews included:

1. How are products sold and distributed?
2. What is the potential for a coordinated distribution system for urban growers?
3. What are the biggest challenges regarding the distribution and selling of the product?

Forty urban farmers, CSAs, distributors, local markets, and restaurants located in Los Angeles County were contacted. The research team attempted to reach to a broad spectrum of growers. Of the 40 entities contacted, 20 responded affirmatively to participate in the research project. The following is the complete list of growers and business that were contacted for interviews. For confidentiality purposes, those that provided information for the research are not identified.

	Business	City
Urban Farmers	Aroma Orchids Garden	Rowland Heights
	Bills' Bees	Lake View Terrace
	Elser's Country Farm	Altadena
	Energy Bee Farm	Los Angeles
	Evo Farm	Mar Vista, Los Angeles
	Greenshower Farm	Rowland Heights
	Honey Pacifica	Long Beach
	Kobata Growers	Los Angeles
	Mariposa Creamery	Altadena
	Moraga Vineyard	Los Angeles
	Papaya Tree Nursery	Granada Hills
	Pine Street Products	Altadena
	Scattaglia Family Farms	Littlerock
	Shiitake Happens	Hermosa Beach
	Silver Lake Farms	Silver Lake, Los Angeles
	Stanford Avalon Community Garden	Los Angeles
	Tenerelli Orchard	Littlerock
	The Cityfarm	Los Angeles
	The Growing Home	Diamond Bar
	Whisper Farms Aquaponics	Pasadena
	Winnetka Farms	Winnetka, Los Angeles
	Yasutomi Family Farm	Long Beach
Community Supported Agriculture (CSAs)	Muir Ranch (John Muir High School)	Pasadena
	Whittier Backyard Farm	Whittier
Distributors	FreshPoint	City of Industry
	GoodEggs	Online (www.goodeggs.com)
	Heath & Lejeune	Commerce
	Locaverse	Online (www.locaverse.com)
Food Markets & Grocers	Atwater Village Farm	Los Angeles
	Bristol Farms Grocery Retailer	Los Angeles
	Co-Opportunity Natural Foods	Santa Monica
	Gelson's Supermarket	Century City, Los Angeles

Food Markets & Grocers	Ralphs Grocery Store	Los Angeles
	Sprouts Farmers Market	Culver City
	Vons Supermarket	Santa Monica
	Whole Foods	Santa Monica
Restaurants	Cafe Gratitude	Venice, Los Angeles
	Elf Cafe	Los Angeles
	Forage	Silver Lake, Los Angeles
	fundamental LA	Los Angeles

List of Contacts for Research

FINDINGS

Researchers accumulated a wealth of knowledge from interviews with urban farmers, CSAs, distributors, grocers and restaurants. The information collected is primarily anecdotal, with each farmer and business owner imparting his or her own unique experience with food distribution. Unlike industrial agriculture, there is no traditional distribution system for urban farmers. Distribution methods vary, but the end-goal is consistent across the spectrum: find a way to sell and distribute the product as efficiently as possible. The following sections summarize the results of the interviews across five typologies: urban farmers, CSAs, distributors, grocers, and restaurants.

URBAN FARMERS

The most common method by which urban farmers in Los Angeles County transport their products is via personally owned vehicle. All interviewees identified a personal vehicle—be it a truck, minivan or station wagon—as the primary vessel used for distributing their products. Vehicles were mostly owned by the urban farmers before they began their urban agriculture ventures. Some of the more profitable growers, however, purchased pickup trucks specifically for distribution using profits from their businesses. Based on the interviews, regardless of vehicle, farmers were the ones driving their product to farmers markets and other retail outlets. Unlike conventional distribution system for large-scale agriculture,

there are no third-party distributors or cold chain management entities. Cars, trucks, and vans that transport urban farmers’ children to school in the mornings also serve as distribution tools for their food products, sometimes on the same trip chain. Based on information gathered from the interviews about where each urban farmer self-distributes their product, the researchers determined that the average distance each for-profit urban farmers travels to sell his or her product is roughly 13.9 miles.

There are various obstacles to distribution in urban agriculture, but none more prominent than time and money. Each urban farmer interviewed listed both time and money as the limiting factors regarding distribution and expansion of their businesses. Agriculture is a very time-intensive occupation, so having an employee or third-party vendor in charge of distribution is an enormous boon for those who can afford it. Unfortunately for urban farmers, this is not usually an option. As discussed previously, food distribution networks cater to mega-growers and supermarkets, not urban agriculturalists. The only method available for most of the interviewed urban farmers is self-distributing their products at farmers markets, a time-consuming process with limited profitability. Not only must the farmer commute to and from the market, but they must also remain at the market for the duration of the event.

Most urban farmers were very open to the idea of a third-party distributor or distribution network tailored to small-scale urban agriculture. Almost all growers interviewed

The most common method by which urban farmers in Los Angeles County transport their products is via personally owned vehicle.

Because urban farming is an unpredictable endeavor, growers must be resourceful when it comes to selling and distributing their products. Most urban farmers seek to diversify their distribution methods in order to reach as many potential customers as possible.

stated that having somebody else take care of their distribution would allow them to focus more on diversifying their crops and increasing production. However, some of the urban farmers rely on being present when selling their products (see Economics and Geography Chapter). One farmer in particular highlighted the importance of self-marketing because she sells more than just food products; for many urban farmers, their knowledge is just as valuable as their foodstuffs. Many urban growers supplement their farming businesses by teaching gardening classes, giving tours, and renting out their farms or gardens for events. Urban farmers do the majority of marketing themselves via face-to-face contact with customers at farmers markets or, as was the case with growers interviewed at the Stanford Avalon Community Garden, face-to-face contact with peers, neighbors, friends and local ethnic businesses. The establishment of a third-party distributor tailored to urban agriculture would many allow urban farmers to grow their agricultural businesses, but not without trade-offs.

Distribution schedules amongst urban farmers are varied and idiosyncratic. The ma-

jority of those interviewed said that the distribution of their product is constantly evolving and may change from week to week. Urban agriculture is a fickle business; if tomato plants fall victim to a predator, there may not be any product for the farmer to distribute. If a farmers market is canceled due to inclement weather or other insurmountable circumstances, there may be not be anywhere for the farmer to sell his or her product. Because urban farming is an unpredictable endeavor, like agriculture in general, growers must be resourceful when it comes to selling and distributing their products. Most urban farmers seek to diversify their distribution methods in order to reach as many potential customers as possible. Some urban farmers sell their food products online. One interviewee, The Growing Home in Diamond Bar, has had success selling dried herbs through the e-commerce website Etsy.com. Through the website, the farmer has connected with customers as far away as Virginia. Selling online and distributing via FedEx or UPS, however, accounts for a small percentage of sales of most urban farmers interviewed. The majority of their profits come from selling their products locally.

Most urban farms are small, usually occupying a backyard or a space of similar size. Like in the Economics and Geography Chapter, this research found that of the farms interviewed, almost all were family-owned operations with the majority of labor coming from the proprietors and their family members (parents, siblings, and children) as opposed to hired employees. The spectrum of clientele, however, varied between farmers. The growers at the Stanford Avalon Community Garden sell their produce to neighbors, friends, and even ethnic grocery stores in Hollywood and MacArthur Park. Other urban farms focus on selling to consumers at farmers markets.



*Rishi Kumar showing his front yard garden.
Photograph by Zachary Zabel,
The Growing Home, Diamond Bar, CA*

	Distance
Average Distribution Distance for Urban Farmers	13.9 miles
Average Distance Traveled for Vendors at Farmers Markets	46.8 miles

Distribution Vehicle Miles Traveled (Diamond, 2011)



*Muir Ranch at John Muir High School distributes food through a CSA.
Photograph by Kelly Rytel, Muir Ranch, Pasadena, CA*

COMMUNITY SUPPORTED AGRICULTURE

Community Supported Agriculture, or CSA, is an economic model of agriculture and food distribution where subscribers pay at the onset of the growing season for a share of the anticipated harvest. The subscribers receive weekly shares of produce and other foodstuffs from the harvest in a vegetable box. Researchers were primarily interested in how CSA subscribers receive their food boxes and how urban CSAs get the produce for the boxes. CSAs are part of a dual-distribution system with produce coming in and food boxes shipping out.

The most common way for CSA subscribers to receive their produce box is to pick it up themselves at a predetermined location. For instance, Muir Ranch at the John Muir High School in Pasadena requires its CSA subscribers to come to the school on Mondays to receive their vegetable boxes. Most CSAs do not have the manpower or resources necessary to deliver their boxes to their customers' doorsteps, although some CSAs charge high prices for their weekly produce boxes. There is a large price range between CSAs in Los An-

geles County. Muir Ranch's price of \$25 per box falls close to the middle of the spectrum. Boxes can be as cheap as \$15 (South Central Farmers CSA) and as expensive as \$30 (Tanaka Farms). There are a few CSAs which deliver, but their prices are steep compared to those with pick-up locations. Farm Box LA will deliver anywhere in Los Angeles for \$100 per large box which includes fresh produce and fresh squeezed juice.

Urban CSAs frequently lack enough growing space to fulfill their box orders. CSA subscribers are similar to any conventional produce consumer in that both crave a diversity of crops. Even the two-acre school garden at John Muir High School is not large enough to consistently supply its 150 subscribers with an evolving variety of fruits and vegetables on a weekly basis. For this reason, urban CSAs have found a way to band together and share crops. Muir Ranch serves as a wholesale aggregator where larger farms, some of which are not located in Los Angeles County, drop off produce for the CSA. In fact, Muir Ranch only grows about one-quarter of the produce in its CSA boxes. Whittier Farms and South Central Farms, both CSAs in urban Los Angeles County, receive produce from Muir Ranch

The most common way for CSA subscribers to receive their produce box is to pick it up themselves at a predetermined location.

Urban CSAs frequently lack enough growing space to fulfill their box orders.

It has not proven to be economically beneficial for large distribution companies to scale down their operations to accommodate small, urban farmers.

The number of different online distributors of local products is a testament to the lack of a singular, coordinated distribution system for small-scale growers.

for their own vegetable boxes. In an urban environment where gardens are too small to supply a constant diversity of vegetable and fruits, CSAs have found a way to collaborate, trade, and share their produce in order to satisfy subscribers. Having a singular site serve as an aggregator and distribution center, like Muir Ranch does, is an interesting idea that has the potential to be applied to other typologies of urban agriculture.

DISTRIBUTORS

Researchers interviewed two types of distributors: traditional trucking companies and upstart web-based distributors. According to the traditional rubber-to-the-road distributors, large companies are directing more effort towards providing local and healthy foods. Sysco, as well as other large distributors, is reducing product vehicle miles traveled (VMT) by sourcing from closer farms. However, urban farmers are still left out of the process. As touched on earlier, urban growers do not harvest enough product to fulfill orders to mega-retailers, such as supermarkets and chain grocery stores. It has not proven to be economically beneficial for large distribution companies to scale down their operations to accommodate small, urban farmers.

Web-based distribution companies are attempting to fill the gap between urban farmer and retailer. In the summer of 2013, Locaverse—an online distribution system for Los Angeles area growers—will launch its business with a mission to sustain the local Los Angeles food system by supporting the distribution network of local farmers and urban growers. Similar to a food hub or CSA, Locaverse will aggregate and ship fresh products directly to their customers' doorsteps. A website and application will feature various interactive features for customers to track the local identity of food products and farmers. Farmersmarket-fairy.com is another online delivery site, with the aura of a personal shopper. Customers can choose from a selection of available produce or take suggestions from staff based on budgets, likes, dislikes, and needs.

The number of different online distributors of local products is a testament to the lack of a singular, coordinated distribution system for small-scale growers. Many different business models share the goal of bridging the gap between urban farmers and consumers. Web-based distributors like Locaverse, FarmersMarketFairy, and GoodEggs hope to capitalize on the ever-growing Internet and social media movement.

GROCERS AND MARKETS

It was unsurprising for the researchers to learn that mega-grocers and supermarkets do not sell any produce grown in urban gardens. These grocery giants are part of the large-scale agriculture food chain: industrial-size farms grow produce that is distributed by large companies to mega-retailers. It was surprising, though, to learn that even local grocery stores questioned, such as corner stores, do not source any of their product from urban farmers.

The primary reason urban growers have a hard time selling their products even to neighborhood stores is that the stores must cater to the needs and wants of their customers. Consumers want and believe the best apples come from Washington, so the grocery store sources apples from Washington. Bananas, an extremely popular item, are shipped from tropical regions. These items are also cheaper to source than urban agriculture because they are commodities.



*Wholesale distribution at a Los Angeles supermarket.
Photograph by Zachary Zabel, Los Angeles, CA*

"I don't know where our produce comes from, I just order it and it shows up."

- Produce manager
at a Los Angeles-
area major
supermarket

For many restaurants, the word "local" means any food product that was purchased at a farmers market.

Across the food distribution spectrum, the word "local" has been diluted into nothing more than a marketing gimmick.

Los Angeles County has historically produced some of the world's best produce. But when it comes to urban agriculture, there is an educational factor that prohibits some storeowners from supplying city-grown products. Through the interviews, the researchers found that owners and produce managers of neighborhood stores want to sell produce from urban farms. However, they believe that some customers do not understand why supporting urban farmers is so important and may even be wary of the idea. Storeowners do not have time to explain to customers what exactly aquaponics is, for example, or how it works. As a small business owner with low margins, it is easier and safer to supply products that are familiar to the consumer, like a Washington apple.

RESTAURANTS

No restaurateurs interviewed by researchers sourced produce from urban farmers. Forage, a local restaurant in the Silver Lake neighborhood of Los Angeles, takes donations mostly from backyard gardens. Urban growers have yet to establish themselves as a viable source of produce for Los Angeles area restaurants, even those which advertise their food as local.



*Whole Foods Market at Santa Monica.
Photograph by Zachary Zabel*

DEFINING "LOCAL" IN LOS ANGELES

Defining the word "local" is a difficult task, especially in a sprawling urban metropolis like Los Angeles. As the local food movement continues to grow and gain in popularity, more and more restaurants, grocery stores, and local food markets are shifting towards providing "locally grown" fare. The researchers reached out to six Los Angeles area supermarket chains (Ralphs, Bristol Farms, Sprouts, Gelson's, Vons, and Whole Foods) which advertise their produce as "local" and asked two questions:

1) Do you sell local produce?

2) How do you define "local"?

All six grocery stores contacted defined "local" as produced anywhere in California. While "local" was defined broadly by all six supermarkets, only a few strived to source produce from nearby farms. One produce manager from an undisclosed store stated that he doesn't know where the produce comes from—he just orders it and it shows up. Sprouts and Whole Foods, on the other hand, supply produce grown in Los Angeles County and surrounding counties. Whole Foods even has in-store displays advertising the distance which produce has traveled from farm to shelf. The foodshed, or geographic region that supplies food to a certain supermarket, is much smaller for some grocery stores than others even though all define "local" similarly.

Restaurants that advertise using "local" ingredients also seem to share a common definition of the word. For many restaurants, the word "local" means any food product that was purchased at a farmers market. Many vendors at Los Angeles farmers markets, though, travel great distances to sell their products. It is common for vendors from farms and nurseries located hundreds of miles away to drive to farmers markets to sell allochthonous products under the pseudonym "locally grown". Across the food distribution spectrum, the word "local" has been diluted into nothing more than a marketing gimmick.

ANALYSIS

Identifying a common distribution network used by urban farmers is like solving a jigsaw puzzle with missing pieces. When some pieces start fitting together, the crucial piece that links them to the rest of the puzzle is missing. There is not one distribution network between urban farmers and retail outlets in Los Angeles County. Each urban farmer has a different method for distributing and selling his or her product and, for the most part, each does it alone.

This research did not identify a common distribution network for urban farmers in Los Angeles, but it shed light on what the missing pieces to the puzzle may be. For instance, there appears to be a major disconnect between urban farmers and markets/restaurants that source local food. There are close to 10,000 combined full-service restaurants and grocery stores in Los Angeles County (city-data.com), with more and more marketing their “locally sourced” products. However, as evidenced in researchers’ interviews, seldom do urban farmers sell to restaurants and markets. This is disconcerting considering the proximity of urban growers to such retail outlets. Urban farmers are present at popular farmers markets where many restaurants and markets purchase produce from, such as the Santa Monica Farmers’ Market or Hollywood Farmers’ Market, but are many times overshadowed by larger vendors from rural farms.

There are various arguments for why urban farmers are unsuccessful when it comes to selling their products to restaurants, grocers, and even common citizens. For example, there is the notion that urban farmers lack the ability to grow a sufficient amount of produce in a predictable and reliable manner. Whether or not this is true has not been proven, but brick-and-mortar retailers like restaurants and markets do depend on reliable suppliers. Word of mouth also plays a pivotal marketing role for small, urban growers who have limited resources to allocate towards advertising. Two other issues emerge from the research that help explain the difficulties urban farm-

ers face when it comes to selling and distribution: 1) high prices compared to larger, rural farms, and 2) the lack of an appropriate venue in which to market and sell their products.

Researchers found that the price of purchasing products from urban farmers is often inflated compared to their rural counterparts. For example, some of the urban farmers interviewed sell organic eggs for \$1 each, whereas the typical price for supermarket eggs is \$1.50 to \$3.50 per dozen. This comes as no surprise considering the small-scale operation of urban farms and the concept of economies of scale. For many urban growers, it is a cruel economic cycle; they are unable to sell their products to restaurants and grocers because their price point is too high and the margins are too low for the retailers, but the only way to bring prices down is to scale up their entire operation which cannot happen until they can distribute and sell their products.



*Photograph by Zachary Zabel.
The Cityfarm, Glassell Park, Los Angeles, CA*

This is a common conundrum faced by all entrepreneurs, but can be especially troubling for urban farmers. For many urban growers, scaling up is not an issue that can be solved with investors and money. Urban farmers do not have the option of outsourcing their labor or moving their production facility offshore. The allure of urban farming is that it takes place locally on a small plot of land located in an urban environment. Although most growers identified time and money as the most salient issues they face on a daily basis, the process of scaling up their operations is limited by more

For many urban growers, it is a cruel economic cycle; they are unable to sell their products to restaurants and grocers because their price point is too high and the margins are too low for the retailers, but the only way to bring prices down is to scale up their entire operation which cannot happen until they can distribute and sell their products.

The relatively high prices of city-grown foodstuffs may be an unavoidable byproduct of growing in an urban environment. What urban farmers really need is a retail outlet in which to distribute and market their product in a cost-efficient manner.

Folding urban food products into the same category as “local” foods obscures the entire urban agriculture movement.

than checkbooks and daylight. Large, rural farms can sell their products at competitive prices because of their tremendous output but the output of small, urban farms is limited by the size of the lot. The relatively high prices of city-grown foodstuffs may be an unavoidable byproduct of growing in an urban environment. What urban farmers really need is a retail outlet in which to distribute and market their product in a cost-efficient manner.



*Hollywood Farmers' Market.
Photograph by Nicholas Efron, Los Angeles, CA*

Researchers found that farmers markets are the most common model for distribution and marketing for urban farmers. While farmers markets have many benefits, they are not perfect locations for urban farmers to sell their products. The biggest farmers markets in Los Angeles, such as the Santa Monica Farmers' Market and the Hollywood Farmers' Market, are mostly comprised of vendors from rural farms located hundreds of miles from the city where land is cheaper and in abundance. Small, urban farmers cannot compete with these larger enterprises when it comes to quantity of product and prices. To pit the urban farmer against the rural farmer puts the former at a disadvantage. Although farmers markets advertise local products, “local” does not always mean the same thing. The urban farmer is more local than the rural farmer, but both may be situated next to each other at a farmers market where shoppers assume that both are equals. The term is a misnomer and urban farmers would be better off if their products were branded “urban agriculture,” “city-grown,” or even “ultra-local.” Folding

urban food products into the same category as “local” foods obscures the entire urban agriculture movement.

RECOMMENDATIONS AND FUTURE RESEARCH

The distribution methods used by urban growers in Los Angeles County are as diverse as the growers themselves. There are a multitude of distribution methods available for urban farmers, although the research shows that the majority of urban farmers rely on little more than their own muscle and personally owned vehicles to move their products to farmers markets, farm stands, and other retail outlets. As important as these outlets are, they by no means represent the economic apex of urban agriculture in Los Angeles. The researchers recommend the following courses of action to help urban agriculturalists scale up their distribution and turn their modest businesses into more profitable enterprises:

- Create an “urban agriculture healthy food hub.”
- Implement a coordinated marketing scheme, either with a product identity label identifying city-grown products or a growers' association for urban farmers.
- Establish a consumer awareness program to help educate shoppers about urban agriculture in Los Angeles.
- Revise city laws and/or zoning codes to allow urban farmers to sell their products on-site.
- Circulate a comprehensive survey to conduct further research on distribution models amongst urban farmers.

The current direct-to-consumer marketing outlets, such as farmers markets and farm stands, require growers to not only drive their products to a designated place, but also to market and sell their products throughout the day. This process is an inefficient use of time and results in meager cash returns.

Researchers recommend a new model food hub for Los Angeles County—one which caters specifically to urban growers.

Create an “Urban Agriculture Healthy Food Hub”

Urban growers commonly identify lack of time and money as major hindrances to distributing their products. The current direct-to-consumer marketing outlets, such as farmers markets and farm stands, require growers to not only drive their products to a designated place, but also to market and sell their products throughout the day. This process is an inefficient use of time and results in meager cash returns. A regional food hub would address the issue of time value of money by providing services and resources necessary for selling and distributing products more efficiently. Regional food hubs can provide producers with access to larger volume markets by actively coordinating supply chain activities (Barham et al., 2012).

Regional food hubs have existed in the United States for over two decades, with roughly 60% forming in the last five years (Cook et al., 2013). From Spokane to Birmingham, regional food hubs assist in the distribution and sales of local foodstuffs. A food hub is an organization or business that coordinates the storage, aggregation and distribution of locally produced food. More specifically, Brenneis et al. (2010) define a regional food hub as: “An integrated food distribution system that coordinates agricultural production and the aggregation, storage, processing, distribution, and marketing of locally or regionally produced food products.”

Food hubs do not have to be brick-and-mortar businesses, although many are. The Santa Monica Farmers’ Market—the only food hub in Los Angeles County—incorporates an “unofficial” wholesale operation, whereby the coordination of orders occurs directly between farmers and customers with no assistance from a farmers market association or management (Brenneis et al., 2010). Farmers take orders directly, prepare them at farms, and then deliver the wholesale order to the market to be picked up. For example, the market provides fresh produce to the Santa Monica-Malibu Unified School District for

their cafeterias—the produce is ordered in advance from vendors and picked up by the schools at the market. However, the Santa Monica Farmers’ Market food hub is incapable of supporting many urban growers. It lacks permanent infrastructure and a central management structure for wholesale operations that coordinates sales (Brenneis et al., 2010). It also relies on farmers to have their own refrigerated trucks, which most urban growers cannot afford for their small-scale businesses.



*Santa Monica Farmers’ Market.
Photograph by Nicholas Efron, Santa Monica, CA*

Food hubs come in all shapes and sizes, but this report cannot provide an in-depth examination of each type. Food hubs can be non-profit organizations, private enterprises, cooperatives, or publicly held entities. Some utilize a farm-to-business model, others a farm-to-consumer model. While their basic purpose remains constant, each food hub is different as each reflects the community it serves. Researchers recommend a new model food hub for Los Angeles County—one which caters specifically to urban growers. No other food hub in the United States targets urban agriculture as its sole provider.

The researchers recommend the formation of a food hub for urban growers in Los Angeles based on the model provided by the Local Food Hub in Charlottesville, Virginia. The Local Food Hub utilizes a central, brick-and-mortar hub as its aggregation point. In this scenario, suppliers deliver their produce to a central warehouse where it can then be picked up by restaurants, wholesale buyers, or

A brick-and-mortar warehouse which serves as a distribution hub and also hosts weekly farmers markets where urban farmers can share knowledge and plan events would be a tremendous revenue opportunity for many stakeholders.

The researchers do not foresee an urban agriculture food hub as an alternative to a regional food hub in Los Angeles. Rather, both can benefit Los Angeles tremendously in different ways.

third-party distributors (Cook et al, 2013). The Local Food Hub maximizes its location near an interstate highway to have its product carried as a “backhaul” on other food wholesalers’ trucks that would otherwise be returning empty (Cook et al., 2013). Backhauling refers to a truck taking a load back to its originating terminal.

Of course, the greater Charlottesville metropolitan area has a population of roughly 120,000 people, much smaller than that of Los Angeles County (approximately 10 million residents). The Local Food Hub imports products from rural farms within a 100-mile radius, a distance equivalent to the geographical size of Los Angeles County. Because the proposed food hub would be strictly for farmers who qualify as urban growers in Los Angeles County, the amount of food imported might be comparable to a food hub in a city as small as Charlottesville because urban farmers grow on smaller lots and produce smaller yields.

A central brick-and-mortar warehouse is an essential feature of any food hub distributing fresh produce as it allows for cold storage. Urban farmers will also respond favorably to the ease of having one, central location for dropping off their products. The benefits extend to local food markets—an urban agriculture food hub can eliminate the disconnect between urban farmers and markets looking to source locally produced products. However, since some urban growers rely heavily on the marketing of their products and face-to-face interactions with customers are an essential part of many urban farming businesses, researchers recommend a hybrid hub marketplace. A brick-and-mortar warehouse which serves as a distribution hub and also hosts weekly farmers markets where urban farmers can share knowledge and plan events would be a tremendous revenue opportunity for many stakeholders.

Aside from allowing urban farmers to interact directly with consumers, a weekly farmers market would enable urban farmers to interact with one another. With regard to distribution, urban agriculture has a huge advantage compared to rural farms: urban farms

are in close proximity to one another. There is a tremendous opportunity for urban farmers to partner with one another to co-distribute their products. For instance, partnerships can arise where farmers take turns making deliveries to the warehouse. An urban agriculture hybrid food hub/farmers market would create a common meeting space where growers can interact and form these types of mutually-supportive business partnerships, a key feature of “healthy food hubs” (USDA, 2010). Food hubs reflect the personality of their farmers, and face-to-face interaction at farmers markets is a significant feature of urban agriculture.

Selecting the best location for the proposed urban agriculture food hub is essential to its success. It should be located in an easily accessible area, preferably near a freeway, in an urban environment in proximity to a variety of urban farmers. Discerning the exact location is an arduous task based on a number of factors; however, the maps featured in this report serve as a good basis on which to begin research.

Establishing an appropriate management system is also important. As stated previously, food hubs can be non-profit organizations, city-run entities, cooperatives, or private enterprises. Each model has benefits and pitfalls, and the research is too undeveloped at this point to identify which model would work best for an urban agriculture food hub in Los Angeles. Other issues that need to be considered are the costs of starting and staffing a food hub, and the process of marketing the idea to urban farmers and retail outlets in Los Angeles County.

The Los Angeles Food Policy Council (LAFPC) has deliberated over creating a regional food hub in Los Angeles as part of its “Good Food for All Agenda.” The researchers do not foresee an urban agriculture food hub as an alternative to a regional food hub in Los Angeles. Rather, both can benefit Los Angeles tremendously in different ways. The “Good Food for All Agenda” is primarily concerned with promoting better health and well-being among residents, especially those in low-income neighborhoods, by importing

The term “local” has been diluted in the greater Los Angeles area to mean anything from the state of California. So as not to confuse consumers, a “city-grown” label would clearly identify food products grown in Los Angeles.

There are as many definitions of “local” as there are people who market their produce.

fresh produce from farms outside Los Angeles County into the inner-city. The food hub will also work to promote agricultural stewardship throughout the greater Los Angeles region (a 200-mile radial foodshed, as described by the LAFPC). The goals of the proposed urban agriculture food hub, however, are economically driven. The central warehouse will promote city-grown products and create a third-party coordinated distribution system for urban farmers so as to address issues associated with marketing, aggregating and distributing products, and creating a more economically viable urban agriculture industry.

Implement a coordinated marketing scheme either with a product identity label identifying city-grown products or create a grower’s association for urban farmers

The term “local” is an overused label applied loosely by restaurants, supermarkets and even farmers markets. Urban agriculture is currently being grouped together with the rest of “locally grown” food products both in definition and in practice. At farmers markets, urban growers are stationed next to rural farmers all under the name of “local food.” The term is used colloquially; there is no universal or analytical definition of what “local food” means, and it is not this project’s focus to provide one. There are as many definitions of “local” as there are people who market their produce.

However, this report has provided a working definition of “urban agriculture” (see Introduction) and using this definition to identify urban-grown products as a unique category of foodstuffs will be beneficial to urban agriculture entrepreneurs. As an industry, urban agriculture has the potential to grow on its own. With the right distribution system and marketing, urban farmers can become a more vital component of the greater Los Angeles food economy. One important step towards this realization is distinguishing between “local” foods and city-grown foods.

No food is more local to Los Angeles than that grown in the city, and it should be marketed as such. One way to identify city-grown food products is to label them accordingly whether they are for sale in a restaurant, a supermarket, or a neighborhood store. Food stickers are no novel idea. Most produce comes with a sticker identifying the company which produced or marketed it. This concept can be applied to urban agriculture. Researchers propose the implementation of a sticker identifying products grown in an urban environment so as to maintain the local, urban identity of the product.

A similar idea is being rolled out in the greater Chicago area. According to the Chicago Food Policy Advisory Council, the new “Local Hero” food label is designed to both celebrate and increase demand for food grown through urban agriculture (Rotenberg, 2013). A similar strategy can be implemented in Los Angeles; however, researchers recommend the label specifically identify the food product as city-grown. The term “local” has been diluted in the greater Los Angeles area to mean anything from the state of California. So as not to confuse consumers, a “city-grown” label would clearly identify food products grown in Los Angeles. Implementing the sticker system would require coordination between all urban growers in Los Angeles. The proposed urban agriculture food hub could facilitate the sticker program, adding “city-grown” stickers to the food products as they are dropped off and aggregated.

Differentiating urban agriculture products from other foodstuffs may be a successful marketing ploy. Giving city-grown products their own commercial identity allows them to stand out in the consumers’ minds. However, individually marking each city-grown product can be a costly process. It is unclear how the “Local Hero” label is being funded in Chicago, but during interviews with food distributors, researchers learned that adding stickers to each tomato or avocado is a costly and time-consuming process. The urban agriculture food hub might need funding or volunteers to label each product with a sticker.

A coordinated marketing scheme can easily be implemented through the proposed urban agriculture food hub. The city-grown food that flows through the hub can be re-packaged under the same logo identifying the product as urban agriculture.

In order for urban agriculture to establish its own niche in the local food movement, it needs to be well-understood by its consumers.

The Ojai Pixie Growers' Association provides a great example of how to market a product that was once believed by many to have limited commercial value. The Pixie tree takes almost eight years to come into full bearing, and heavy crop years are usually followed by a year of light crop yields (Ojai Pixie Growers Association, 2013). The Association is comprised of nearly 40 family-run farms in Ojai that all grow the seedless tangerine (Ojai Pixie Growers Association, 2013). Although each farm is its own entity, each sells the pixies under name of the Ojai Pixie Grower's Association using the same orange label. In addition to coordinating the marketing of the pixies, the Association facilitates the sharing of information between farmers about growing the fruit.



*Ojai Pixies at a Los Angeles supermarket.
Photograph by Carol Goldstein, Los Angeles, CA*

A coordinated marketing scheme can easily be implemented through the proposed urban agriculture food hub. The city-grown food that flows through the hub can be re-packaged under the same logo identifying the product as urban agriculture. This sort of marketing ploy would be easier and cheaper to implement than attaching individual stickers to each product. In addition, urban farmers would benefit from an association allowing them to share information, tips, and useful

techniques for growing in an urban environment. Like the Ojai pixie tangerine, growing in an urban environment can be a difficult process given unclear zoning regulations, limited garden space, and a variety of other factors. Weekly meetings, or even a website, could facilitate information sharing. Combined with the proposed weekly farmers market located at the urban agriculture food hub, where informal information sharing would occur, a more formal platform like a growers association would yield valuable opportunities for urban farmers.

Establish a consumer awareness program to help educate shoppers about urban agriculture in Los Angeles

Urban agriculture is more prevalent in Los Angeles County than most people realize. As described in the Mapping Urban Agriculture Chapter of this report, urban agriculture is often hidden, but it is blossoming into a significant industry. Because many people do not know much about it, they may be wary of its outputs. One local food market interviewed stated that they would love to sell city-grown products but are unsure if their customer base would purchase hydroponically-grown lettuce without knowing what hydroponic agriculture is.

In order for urban agriculture to establish its own niche in the local food movement, it needs to be well-understood by its consumers. Researchers recommend creating an informal educational program where urban farmers and other experts can teach consumers about various urban growing techniques and the benefits of urban agriculture. Many urban farmers already consider knowledge-sharing an invaluable part of the urban agriculture industry, and many shoppers at farmers markets and grocery stores still do not realize or understand its benefits. They are a large consumer base that urban farmers have yet to tap into.

In order to help reach these customers and bridge the gap between urban agricul-

UC Cooperative Extension in Los Angeles County (UCCE-LA), might help support these educational demonstrations by promoting, funding, or facilitating the connections between urban farmers and retail outlets.

Relaxed restrictions on sales of produce on-site would not only convenience farmers by saving them time and monetary costs associated with traveling to farmers markets, it would benefit customers as well.

ture and brick-and-mortar retail outlets, these researchers recommend establishing educational sessions in local food markets. For example, a neighborhood market can sell aquaponically-grown lettuce on a Saturday while hosting the farmer to give free informational lessons to customers in the store about what aquaponics is and how it works. Free educational demonstrations in stores will attract customers to both the market and the farmer's products, as well as highlight benefits associated with urban agriculture such as reduced vehicle miles traveled of food products from farm to plate, environmental and health benefits of reduced greenhouse gas emissions, and the importance of supporting local businesses. A similar plan can be established in farmers markets as well. The client for this project, UC Cooperative Extension in Los Angeles County (UCCE-LA), might help support these educational demonstrations by promoting, funding, or facilitating the connections between urban farmers and retail outlets. UCCE-LA has extensive experience and familiarity with developing and implementing community-based educational programs.

Revise municipal and zoning codes to allow urban farmers to sell their products on-site

Many issues associated with distribution of goods can be avoided altogether. One way to do this is to allow farmers to sell their products on-site so that they do not have to travel to farmers markets and spend the majority of their day behind a table. Instead, urban farmers can adopt the pick-up strategy used by CSAs where customers come to the farm to purchase produce. Unfortunately, most city codes do not allow residents to transform private problem into retail outlets, and private residences are where many urban agriculturalists produce their products. The City of Diamond Bar, for example, only allows six yard sales per year per home. Researchers recommend a reevaluation of similar laws and regulations across all 88 cities in Los Angeles County to allow urban farmers to sell their products on-site.

Relaxed restrictions on sales of produce on-site would not only convenience farmers by saving them time and monetary costs associated with traveling to farmers markets, it would benefit customers as well. Customers would get to see where their city-grown produce was raised and perhaps pick their own avocados and tomatoes. A seemingly banal trip to purchase produce could be suddenly transformed into an interactive and educational experience for the consumer. The farmer, on the other hand, could reap the benefits of staying home to tend to the garden or the family.

Circulate a comprehensive survey to conduct further research on distribution models amongst urban farmers

Based on researchers' interviews, a food hub oriented towards urban growers is a feasible solution to mitigating issues surrounding the distribution of products. However, a more comprehensive survey of every urban farmer in Los Angeles County needs to be conducted to ascertain the full range of distribution methods utilized by these growers. This would enable the City, the County, private entities, and non-profit organizations to invent better solutions for improving urban agriculture distribution methods. While researchers believe their interviews and conclusions to be representative of urban growers throughout Los Angeles County, a more comprehensive survey of all urban farmers will erase any doubt as to what the best course of action is; whether that is the creation of a food hub, a series of policy changes, or something else.

The research presented in this project is unique in that never before has the topic of distribution of urban agriculture been investigated in depth. With a clearer understanding of the topic at hand than when this project was launched, this research team can now identify more specific questions which future researchers may ask urban farmers in follow-up surveys:

- How long have you (the urban farmer) produced and sold food in Los Angeles County?

It would be revealing to find out how distribution methods change as farmers become more familiar with the process and as their business matures.

- On average, what distance do you travel to distribute and sell your product?

Developing statistics on travel distances would allow researchers to make more robust claims about how urban agriculture can reduce vehicles miles traveled of produce as well as compare greenhouse gas emissions to those of industrial agriculture distribution systems. Also, the statistics could be used to analyze and discern an appropriate location for the proposed urban agriculture food hub.

- How far away is the closest place you distribute? The furthest?

It is important to understand the geographical reaches of urban agriculture. It is as-

sumed that urban farmers sell their crops to other urban retail outlets. However, as learned in an interview with The Growing Home, some urban farmers sell their products to consumers on the other side of the country. Perhaps urban agriculture has the potential to reach markets outside of Los Angeles County. Is a national network of urban growers and consumers forming, or will the movement be constrained to specific urban regions? To how many different retail outlets do you sell your products?

This question sheds light on the best practices for urban farmers: Are urban farmers who attempt to reach as many retail outlets as possible more successful than the farmers who choose to build solid relationships with just a handful of sellers? It would benefit urban farmers to have such data at their disposal. Urban farmers are masters at growing products in an urban environment, but distributing, selling, and marketing their products are often unfamiliar concepts, especially to farmers still in the nascent stages of developing their businesses.

Urban farmers are masters at growing products in an urban environment, but distributing, selling and marketing their products are often unfamiliar concepts, especially to farmers still in the nascent stages of developing their businesses.



*Stanford Avalon Community Gardeners sell produce to ethnic markets in MacArthur Park and Hollywood.
Photograph by Zachary Zabel, Watts, CA*

A food hub sourcing agriculture products from urban growers only could be successful in Los Angeles County.

Further research should focus on farmers who tend plots in community gardens. There are many farmers who sell their products at a very small scale to neighbors, on the side of the road, or to fellow growers. The researchers were able to identify a few community gardens where participants sold their produce, herbs and flowers, such as at the Stanford Avalon Community Garden near the Watts neighborhood, but did not explore this particular typology in depth. Even the smallest-scale farmer plays a role in the greater urban agriculture economy and thus should be included in future research. There is an entire spectrum of typologies of urban growers ranging from individuals who sell herbs from a single flower pot to a multi-acre farm in a spacious backyard, and they use a variety of sales and distribution methods. There are also many urban farmers who do not sell, but barter and trade their products with other growers. For example, individuals with home-grown produce can trade their foodstuffs for a meal ticket at Forage LA, a locavore restaurant in Silver Lake. This report focuses on only a few typologies, namely for-profit growers with conventional business models. The rest of the landscape of urban growers remains unexplored.

CONCLUSION

Cities, by nature, have high land prices and small lots. When it comes to agriculture, land is commonly a limiting factor. The more land one has, the more product that person can grow. Urban farmers are faced with the difficult tasks of attempting to turn a profit by growing a relatively small amount of product without an efficient distribution system. There appears to be a significant disconnect between urban farmers and local food retailers. Urban growers strive to sell their products to wholesalers, and wholesalers strive to sell local foods, but neither seems to be able to meet the other halfway. An efficient and stable distribution network oriented towards urban farmers is needed in Los Angeles. A variety of online platforms are attempting to fill this void but are either in the early stages of

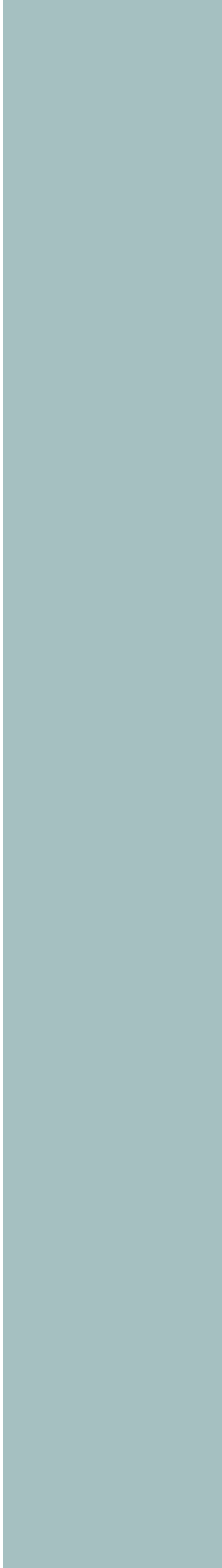
development or lack the ability to promote face-to-face marketing.

These researchers recommend the formation of an urban agriculture food hub. Most food hubs in the United States bring in produce from bordering counties and communities. However, a food hub sourcing agriculture products from urban growers only could be successful in Los Angeles County. The creation of a regional food hub such as the one proposed by the Los Angeles Food Policy Council, would be a great complement to the urban agriculture food hub; the amount of city-grown food in Los Angeles County will never meet the demand of 10 million residents. A weekly farmers market located on-site at the urban agriculture food hub would foster the face-to-face relationships that urban farmers crave and require.



*Scott Henley shows lettuce being grown aquaponically.
Photograph by Zachary Zabel,
Whisper Farms, Pasadena, CA*

The nation's existing food infrastructure does not cater to small urban farmers. Systems are often too large to accept small amounts of product, too far away for small transportation networks to reach, and unable to preserve the local identity of the food (USDA, 2010). As fertile farmland is converted to other uses, food is shipped from greater distances. Mid-sized distributors and wholesalers are going out of business and many communities are left without access to local, fresh foods (Brenneis et al., 2010).



President Barack Obama stated, “Local food systems work for America: when we create opportunities for farmers and ranchers, our entire nation reaps the benefit.” No food is more local than that grown in our cities, but distribution opportunities available for urban farmers are far from refined. Los Angeles is blessed to have a burgeoning urban agriculture scene and should do all it can to support enthusiastic urban agriculture entrepreneurs. The creation of a local food hub for urban agriculture can help mitigate distribution issues and costs, save valuable time, and help create robust networks of farmer-customer and farmer-farmer relationships. An urban agriculture food hub, relaxed on-site sales regulations, a consumer education campaign, and a city-grown sticker program have the potential to transform urban agriculture into a viable economic activity and legitimize it as part of the greater Los Angeles economy.

A photograph of a garden scene. In the foreground, there are several rose bushes with vibrant pink and red flowers. To the left, there are some white flowers. In the background, there are tall green plants, possibly corn, and a chain-link fence. A green circular overlay is positioned in the top right corner of the image.

CONCLUSION

A green circular overlay is located in the bottom left corner of the image, partially obscuring the garden scene.

How's it growing,
L.A.?

The planning profession in Los Angeles is woefully behind at contributing to the practice of urban agriculture, despite numerous examples of effective work in other U.S. cities such as Seattle, San Francisco, New York, and Portland.

Cover photograph
by Zachary Rehm,
Stanford Avalon
Community Garden,
Los Angeles, CA

Cultivate L.A. is the first collaborative report of its kind in scope and perspective as it assesses various aspects of urban agriculture in Los Angeles County. Through the lens of urban planning, the research offers a collection of crucial—and previously unavailable—base-line data for use not only by urban agricultural practitioners, but also by academic researchers and city planners. As students of urban planning, the researchers prepared this report as a call to action for planning practitioners and researchers to gain awareness of the state of the practice of urban agriculture in the county, and to find their place in the engagement of this urban land use, economic opportunity, and community activity.

Through their research, the authors present the case that the planning profession in Los Angeles is woefully behind at contributing to the practice of urban agriculture, despite numerous examples of effective work in other U.S. cities such as Seattle, San Francisco, New York, and Portland. Los Angeles County produces over \$173 million in agriculture products each year (Ross, 2012). This is a substantial figure, considering that L.A. County is also the most populated and urbanized county in the nation and includes 88 incorporated cities. The conversation of Los Angeles County agriculture, therefore, must include the subject of urban agriculture.

As the report concludes, the researchers wish to leave the reader with the general findings of the state of urban agriculture in Los Angeles County, recommendations for stakeholders, and questions for future inquiry. The combination of research methodologies, both quantitative and qualitative, paints a broad picture of urban agriculture in the county, with hints of detail that prompt more fine-grained investigation for vested interests on the local level. The researchers look forward to their “first fruits” of research making way for future studies of urban agriculture, advancing the understanding and facilitation of this most ancient of human traditions as an integral part of today’s urban life.

STATE OF THE PRACTICE

The success of today’s iteration of urban agriculture has yet to be determined

As demonstrated in the School Gardens chapter, the presence of agriculture within city limits is not a new phenomenon in Los Angeles County. However, just as through the past century urban gardening and farming have manifested in a variety of phases, movements, and meanings, we are currently experiencing a resurgence in urban agriculture that is unique to our time. Today, this activity connects to values of self-provisioning, concerns for the environment, and the trend of localized production.

The proliferation of urban agriculture is relatively early in the current trend cycle, as illustrated in the lack of formal networks and resource infrastructure documented in the Distribution and Economic Geography chapters. Indeed, the Land Use researchers found that the different cities in L.A. County were at various stages of relevance and currency in language and content of municipal policies and regulations. Because of a lack of established practice above the grassroots level, the ultimate success, balance, longevity, or failure of this contemporary movement is yet to be determined.

Recommendations

- Build upon existing data to advance the body of research: verified data, academic literature, documented best practices, etc.
- Implement flexible policies that are adaptive to future manifestations of urban agriculture.
- Update municipal and zoning codes to reflect today’s practice, needs and vocabulary.

The lack of a shared or standard definition leads to a disconnect between intention, education, and consumption.

Much of urban agriculture is informal, invisible, and individuated, which fosters a context of scattered and unorganized information, as well as disjointed community and autonomous practice.

The definition of “local” is nebulous

The Economic Geography chapter highlights the cultural desire to consume local food, yet several researchers found that there are multiple and contradictory definitions for “local” in reference to agricultural products. Local food can be more desirable than imported food for a variety of reasons: it is often more fresh and nutritious, is often grown organically on a small scale, employs ethical labor practices, and uses less fuel in distribution. The demand for local food, however, can lead some businesses to use the term as a marketing device, gimmick, or status symbol. The lack of a shared or standard definition leads to a disconnect between intention, education, and consumption. While some regions may define “local” as a day’s truck drive of 500 miles, the richness of the agricultural industry in California and neighboring states, including Mexico, may suggest the need for a more narrow definition.

There is also a lack of clarity in merchandising produce in a conventional retail setting. Customers may want to “eat local,” but often have no way to identify the origins of retail produce or to keep restaurateurs and grocers accountable to sourcing local produce. By contrast, the Economic Geography researcher observed that vendors at the Altadena Farmers’ Market posted the distance of the farm from the market as a way to add value to their products. Similarly, the Distribution chapter touches on how personal connection, fostered by the small market setting, is an impor-

tant part of selling farm products. This allows the customer to connect to the story of the vendor, learn about growing methods, and make informed choices.

Recommendations

- Establish and circulate a specific definition of “local” food appropriate for the Los Angeles County region.
- Launch a marketing and education campaign to create a product identity for city-grown food, L.A. County food, etc.
- Recognize and promote retailers or restaurants that prioritize local agricultural products.

The urban agriculture industry is characterized by disconnection and a lack of coordination

This finding was a common thread throughout the five chapters of the report. Much of urban agriculture is informal, invisible, and individuated, which fosters a context of scattered and unorganized information, as well as disjointed community and autonomous practice. For example, the Land Use chapter illustrates the wide variety of language and regulations found throughout L.A. County municipal codes, and even variant and contradictory regulations within individual codes.



Photograph by Genevieve Hernandez, School Garden, Los Angeles County, CA

Autonomy is not inherently disadvantageous, but as the interviews revealed, improved resource infrastructure and coordination would help urban farmers increase efficiency, expand production, enjoy economies of scale, and promote wholesale security.

This lack of access to information can exacerbate the lack of coordination among stakeholders.

The Mapping team found no existing map or register in which stakeholders could identify agricultural locations for coordination. The Distribution chapter discusses the autonomy that characterizes much of the urban agricultural distribution system. Autonomy is not inherently disadvantageous, but as the interviews revealed, improved resource infrastructure and coordination would help urban farmers increase efficiency, expand production, enjoy economies of scale, and promote wholesale security.

The School Gardens chapter also illustrates the potential benefits of increased coordination. Currently, school gardens are largely uncoordinated and must develop their own sources of funding and organizational assistance, rather than being supported by larger structures. Some are supported by volunteers, whose tenures are short-lived or sporadic in nature. Interviews with school staff confirmed that institutional gardens would benefit from full-time on-site organizers or a district coordinator.

Recommendations

- Maintain a county-wide database and interactive map of urban agricultural sites.
- Establish an urban agriculture food hub that coordinates wholesale distribution for urban farmers and growers.
- Develop additional grants and funds for local school garden organizers.
- Create a model municipal and zoning code template to standardize definitions, clarify regulations, and facilitate appropriate types urban agriculture for a variety of contexts.
- Convene governing agencies to develop a general vision for urban agriculture in Los Angeles County and align localized policies with that vision.

- Create a committee of the Los Angeles branch of the American Planning Association to work on urban agriculture codes, zoning and related planning issues.

The urban agriculture industry suffers from a lack of access to information

A lack of access to information refers to the difficulty of finding and understanding existing formalized information and a dearth of information in general. Complementary to the previous finding, this lack of access to information can exacerbate the lack of coordination among stakeholders. The School Gardens, Distribution, and Economic Geography researchers discovered informal networks of information, but as such were not widely accessible or validated. The Land Use researchers found that the formal language of municipal codes and difficulty of finding, navigating, and cross-referencing the code documents may effectively exclude some stakeholders. The vocabulary of the codes is also inconsistent among the cities and among individual codes, which may lead to confusion and non-compliance. For example, the School Garden researcher found that some public schools were unaware or dismissive of zoning regulations. In turn, the zoning regulations are not adaptive to the special context of school gardens.

In the case of the Mapping research, there were little pre-existing geographical data that were reliable or comprehensive. This is not surprising, given the autonomy typical of urban agriculture. However, great benefits could arise for all stakeholders from the knowledge of agricultural locations with very few drawbacks (unless data reveals non-compliant agriculture).

Similarly, increased information about urban food sources would benefit in the consumer and producer relationship as discussed in the Distribution chapter. A regional urban agriculture food hub would give retailers knowledge of where to buy from local grow-



The Growing Home

Photograph by Zachary Zabel, Diamond Bar, CA

ers, and marketing or “product identity” would help educate consumers about where their food originates.

Additionally, there is a lack of access to technical information among small-scale practitioners. The Economic Geography researcher found that many participants in the Altadena Farmers’ Market desired assistance with business modeling, financing, and other technical know-how. These resources may be available through organizations such as the UC Cooperative Extension or the Taproot Foundation, but are often unknown to independent urban farmers and growers who lack those social and professional connections

Recommendations

- Update municipal and zoning codes with language in common vernacular.
- Translate municipal and zoning codes into primary languages other than English spoken in L.A. County.
- Create media sites, literature and posters summarizing municipal and zoning regulations as related to urban agriculture to be posted in city halls, public libraries, feed and supply

stores, nurseries, farmers markets, etc.

- Compile an online database of agricultural resources for urban gardeners and farmers, such as technical guidance, advocates, lawyers, farmers market information, non-profit organizations, conferences, wholesale or bulk supply sales, etc.
- Maintain a county-wide database and interactive map of urban agricultural sites.
- Develop a “best practices” guide and online forum for the creation and maintenance of school gardens.
- Establish an urban agriculture food hub that provides a clear source of “local” food for retailers and consumers.
- Launch a marketing campaign to create a product identity for city-grown food, L.A. County food, etc.

QUESTIONS FOR FURTHER INQUIRY

Ultimately, this report is a descriptive synopsis of the complex story of urban agriculture

Much of urban agriculture will always take place on the local and informal level, and indeed, there is much to said for the creativity and innovation that such informality can foster.

The findings of this work reveal the lack of engagement and relevancy of urban planning in this field, the lack of coordination of resources and information, but also the opportunities for cooperation among stakeholders on a variety of levels.

in Los Angeles County. The researchers' purpose was not to present polemic argument for or against urban agriculture, nor to convince the reader of the community benefits thereof. Instead, this report provides a useful foundation and springboard for subsequent research in the area of urban agriculture. Much of urban agriculture will always take place on the local and informal level, and indeed, there is much to be said for the creativity and innovation that such informality can foster. However, there is tremendous opportunity for organization, facilitation, and empowerment from broader agencies. Like a well-tended field, cultivation of the urban agriculture industry can produce more from the land than if it is left to pasture. The findings of this work reveal the lack of engagement and relevancy of urban planning in this field, the lack of coordination of resources and information, but also the opportunities for cooperation among stakeholders on a variety of levels.

The researchers recommend the pursuit of the following questions for future inquiry, being outside the scope of this report, but nevertheless important to furthering the conversation of urban agriculture:

Environment

- What are issues surrounding water sourcing, particularly in a water-poor region such as Southern California? What are the effects of water run-off?
- What are issues surrounding contaminants unique to the urban context, such as brownfield sites, lead or other poisons, refuse, or air pollutants?

Commerce

- Can urban produce be "affordable" beyond the scales of domestic consumption or bartering, since high land and labor costs coupled with small scale production generally renders urban food more expensive than rural food?
- How would agricultural terms such as "local" or "animal" or "farm" be best defined so as to clarify the conversation

between stakeholders?

- How does establishing an agriculture zone or permitting agricultural activities in a given zone affect cities fiscally? Can urban agriculture be a profitable and thus desirable land use?
- What are the strongest barriers to entry which are limiting the growth of urban agriculture? How does the volume of urban agriculture production and consumption differ across Los Angeles County, and what does this say about economic development?

Governance

- What is the appropriate or effective scale (i.e. neighborhood, city, county) at which to coordinate community gardens? School gardens?
- How do urban agriculture zones or overlays fit into form-based codes?
- How can urban gardeners and farmers maintain independence and creative freedom while enjoying the benefits of coordination and support from governing agencies?
- What benefits can be observed from various types of urban agriculture in Los Angeles?
- How do cities regulate the products of urban agriculture to ensure that they are safe for human consumption?

Community

- What are the social effects of a school garden or community garden on a neighborhood?
- Does the presence of urban agriculture positively contribute to health outcomes in a neighborhood or city?
- What is the nature of household subsistence agriculture that is being practiced in the city?

GLOSSARY OF TERMS

Agency: The power an individual has in shaping their environment.

Agglomeration: The clustering of people and/or firms in space.

Agricultural waste: By-products of agricultural production such as vegetation and manure that is generally used for composting or fertilizer.

ArcGIS: A geographic Information system tool developed by Esri used for creating and using maps, geographically compiling data, analyzing mapped information, sharing and discovering geographic relationships, using maps and geographic information in a range of applications, and managing geographic information in a database.

Aquaculture: Farming of aquatic life for consumption, such as mollusks, crustaceans and fish. Aquaculture can use fresh or salt water, but the cultivation of aquatic life takes place in a controlled environment.

Aquaponics: When food is grown and fish are raised in a closed-loop nutrient cycle.

Artisanal Food: Food products that are processed to create a crafted, edible good.

Backyard/home gardens: Agricultural activity privately maintained within the portion of a lot or building site, in front of or behind a house or private dwelling.

Community Gardens: A single parcel or parcels of land gardened and maintained collectively by a group of people. The site may include one community plot or an array of individual plots. Growth can include plants or vegetables and may or may not include the production of said goods as a commercial product.

Community-Supported Agriculture (CSA): An economic model of agriculture and food distribution where subscribers pay at the onset of the growing season for a share of the anticipated harvest; subscribers receive

weekly shares of produce or other foodstuffs from the harvest.

Economies of Scale: Economies of scale are achieved “when long-run average total cost declines as output increases” (Krugman and Wells, 2009).

- **Internal Economies of Scale:** Internal economies of scale are achieved when individual firms achieve a lower cost per unit of a good by increasing production.
- **External Economies of Scale:** External economies of scale are achieved when a collection of firms achieve lower costs per unit of goods because of the presence of other firms nearby.

Farm: A tract of land specifically devoted to the on-site production of agricultural goods, specifically limited to plants/vegetation. Sites typically maintained for commercial growth.

Fowl: Any number of birds including, but not limited to, chickens, geese, ducks, pigeons, pheasants, turkeys, poultry, and eggs.

Fauna: Animal life.

Food Hub: A business or organization that manages the aggregation, distribution and marketing of food products primarily from local or regional producers.

Foodshed: The geographic area between where a food is produced to where it is consumed, including the farm on which it is grown, the roads it travels on, and the table on which it is served.

Flora: Plant life.

Fresh Food: Food that is grown and sold without being processed.

Geocoding: Spatial referencing technology that converts input of text-based addresses into spatial locations with longitudinal and latitudinal coordinates presented on maps.

GIS: Acronym for “Geographic Information Systems;” cartographic system based on com-

puter-science technology used for storing and displaying geographic and spatially relevant information.

Green Revolution: A period in the 20th Century when research and development in agricultural technology advanced the yield of certain crops.

Heavy Livestock: Any number of domesticated animals including, but not limited to, cows (cattle), sheep, and ox.

Heritage Breed and Heirloom Seeds: Animals and plant seeds that have not been genetically modified.

Hydroponics: The process of growing plants without soil - usually in sand, gravel or liquid - with added nutrients.

Industrial Agriculture: The industrial model of agriculture that utilizes crop inputs (may include pesticides, herbicides, or fungicides), animal inputs (may include growth hormones or antibiotics), and technical innovations (may include machines or genetic modification) in a highly concentrated manner to utilize internal economies of scale.

Input Sharing: A New Economic Geography term referring to how co-located businesses within an industry share similar inputs and input providers.

KMZ File Format: A compressed version of a KML (Keyhole Markup Language) file, used for place-marking in Google Earth. Contains mapping information such as a custom name, location coordinates and 3D model data.

Labor Matching: A New Economic Geography term referring to how co-located businesses within an industry use the same labor pool.

Learning: A New Economic Geography term referring to how co-located individuals and businesses within an industry share knowledge with each other.

Master Gardeners Program: An educational program of intensive horticulture training, often sponsored by local universities and

university cooperative extension programs, e.g., the University of California Cooperative Extension.

Municipal Code/ordinance: A law set by local and/or regional government.

New Economic Geography: A heterodox economic theory which explains the presence of agglomeration economies.

Nontradeable Good: A good or service that is produced and consumed locally.

Nursery: Site of growth and distribution of plants and trees that may or may not include edible foods. Plants are typically grown to standard sizes and then sold to general public, wholesale growers, commercial gardeners or private nurseries. May include ornamental plant growth.

Orchards: Land designated for organized fruit tree planting activities, often characterized by small trees and/or shrubs with distinctive geometrical planting patterns.

Polygon: On a map, a closed shape defined by four connected coordinates identifying a particular geographical boundary on a map. Polygons can be custom shaped and vary in size (adapted from ESRI).

School Gardens: Primary growth of plants and vegetation in a formal educational setting, specifically at public school sites. Plotted area may be as small as a planter box for the cultivation of one or more plants or vegetables or as large as a full-scale garden with multiple row crops.

Shapefile: Geospatial vector data format for geographic information system software. Shapefiles spatially describe features such as points, lines, and polygons that represent different features in the environment.

Standard Industrial Classification (SIC): System used for classifying industries by primary type of activity.

Types of School Gardens

- **Edible Garden:** An edible garden is a space where students not only grow food for consumption, but also learn about the agricultural process, nutrition and culinary arts (LAUSD, 2013)..
- **Instructional Garden:** An instructional garden acts as a springboard for a wide range of lessons in science, mathematics, history-social science, English-language arts, visual and performing arts, and health. Using a school garden as an integrating context to learning creates the framework for interdisciplinary, collaborative, student-centered, experiential, and engaged learning (LAUSD, 2013).
- **Literacy Garden:** A green space on a school site where students are encouraged to engage in reading and writing activities. It may include benches, tables and chairs, green lawns, and shade trees (LAUSD, 2013).
- **A multi-functional** garden can take many forms, including combinations of many or all of the different types of gardens described above (LAUSD, 2013).

Tradeable Good: A good or service that can be produced in one location and consumed elsewhere.

Urban Agriculture: “Urban agriculture includes production, (beyond that which is strictly for home consumption...), distribution, and marketing of food and other products within the cores of metropolitan areas and at their edges. Examples include . . . innovative food-production methods that maximize production in a small area, farms supplying urban farmers markets, community supported agriculture, and family farms located in metropolitan green belts.” (Adapted from the American Planning Association, 2011).

Note: The Mapping Urban Agriculture chapter further limited the definition of urban agriculture to the growing of plants in the urbanized regions of Los Angeles for commercial, civic, or educational purposes. The scope of the Mapping chapter’s research is limited to plants/vegetation that takes place on non-residential land.

Urbanized Area: Contiguous census block groups with a population density of at least 1,000/square mile with any census block groups around this core having a density of at least 500/square mile. (US Census Bureau)

Vineyards: Site dedicated to the growth of grapevines, typically used in the production of grapes for winemaking.

Zoning Code: The regulation of the use of real property by local and/or regional government. Zoning consists of dividing a particular region of land into districts or zones and specifying the types of land uses that are allowed and prohibited for each zone.

INTRODUCTION

Butler, William (2012). "Welcoming animals back to the city: Navigating the tensions of urban livestock through municipal ordinances." *Journal of Agriculture, Food Systems, and Community Development*, 2(2), 193–215.

Gray, Mary Richards (1913). "The Education of Children in the School Gardens of Los Angeles." *The Craftsman*, 472–479.

Hodgson, Kimberley, Marcia Caton Campbell, & Martin Bailkey (2011). *Urban Agriculture: Growing Healthy, Sustainable Places*. Chicago, IL: American Planning Association.

Lawson, Laura J. (2005). *City Bountiful: A Century of Community Gardening in America*. Berkeley: University of California.

Reynolds, K. (2011). Expanding technical assistance for urban agriculture: Best practices for extension services in California and beyond. Advance online publication. *Journal of Agriculture, Food Systems, and Community Development*.

REGULATING LAND USE FOR URBAN AGRICULTURE: MUCH ADO ABOUT CHICKENS

Boyd, M. (2011). "Urban Agriculture Zoning in Chicago: Navigating the Rules." Retrieved from <https://sites.google.com/site/auachicago/code>.

Butler, W.H. (2012). "Welcoming animals back to the city: Navigating the tensions of urban livestock through municipal ordinances." *Journal of Agriculture, Food Systems, and Community Development*, 2(2), 193–215. Retrieved from <http://dx.doi.org/10.5304/jafscd.2012.022.003>.

Carolin, M., & Stone, E. (2012). "Zoned Out: The Potential of Urban Agriculture Planning to Turn Against its Roots." *Cities and the Environment*, 5(1), 1–12. Retrieved from <http://digitalcommons.lmu.edu/cate/vol5/iss1/>.

Centers for Disease Control (2012, Sept 24). "A Look Inside Food Deserts." Retrieved from <http://www.cdc.gov/Features/FoodDeserts/>.

City of Arcadia (2012). "Sustainable Arcadia." Retrieved from <http://www.ci.arcadia.ca.us/home/index.asp?page=1749>.
Coyne, K., & Knutzen, E. (2008). "The Urban Homestead." Port Townsend, WA: Process Media.

Crane, A., Viswanathan, L., & Whitelaw, G. (2013). "Sustainability through intervention: a case study of guerrilla gardening in Kingston, Ontario." *Local Environment*, 18(1), 71–90. Retrieved from <http://dx.doi.org/10.1080/13549839.2012.716413>.

Erickson, L., Griggs, K., Maria, M. & Serebrin, H. (2009). "Urban Agriculture in Seattle: Policy and Barriers." City of Seattle, Department of Neighborhoods P-Patch Program & Department of Planning and Development. Retrieved from <http://www.seattle.gov/neighborhoods/ppatch/pubs/UrbanAgricultureinSeattlePolicyandBarriers.pdf>.

Gaynor, A. (1999). "Regulation, resistance, and the residential area: The keeping of productive animals in twentieth-century Perth, Western Australia." *Urban Policy and Research*, 17(1), 7–16. Retrieved from <http://www.tandfonline.com/toc/cupr20/17/1#.UYxBRGfZkUM>.

Hodgson, K., Campbell, M. C., & Bailkey, M. (2011). "Urban agriculture: Growing healthy, sustainable places." APA Advisory Service.

Hubach, C. (2012). "Urban Agriculture in Los Angeles County: A Survey and Assessment." Los Angeles Food Policy Council.

Hubach, Cynthia (2013). Personal communication.

Hoeffel, J. (2012). "Bee fans try to get Los Angeles to allow hives in residential areas." *Los Angeles Times*. Retrieved from <http://articles.latimes.com/2012/jul/14/local/la-me-bees20120715>.

Hoffer, Steven (2011). "Oak Park, Michigan Resident Julie Bass Faces 93 Days In Jail For Vegetable Garden." *Huffington Post*. Retrieved from http://www.huffingtonpost.com/2011/07/08/julie-bass-jail-vegetable-garden_n_893436.html.

Huffstutter, P.J. (2010) "For backyard-farmer companies, business is bountiful, *Los Angeles Times*." Retrieved from <http://articles.latimes.com/2010/may/02/business/la-fi-farmers-for-hire-20100502>.

Kuretz, S. (2012). "Battle in the Front Yard." *The New York Times*. Retrieved from <http://www.nytimes.com/2012/12/20/garden/gardeners-fight-with-neighbors-and-city-hall-over-their-lawns.html?pagewanted=all>.

Lachance, J. (2004). "Supporting Urban Agriculture: A Proposed Supplement to the City of Detroit Master Plan of Policies." City of Detroit Planning Department. Retrieved from http://sitemaker.umich.edu/urpoutreachreports/environment__land_use__e_/da.data/88429/Report File/supportingurbanag.pdf.

Land Stewardship Project (2010). "Land Stewardship Project Fact Sheet #21: How U.S. Cities are Using Zoning to Support Urban Agriculture." Retrieved from <http://www.landstewardshipproject.org/pdf/factsheets/21-Urban-Ag-Zoning.pdf>.

Madigan, C. (2009). "The Backyard Homestead." North Adams, MA: Storey Publishing LLC.

Milner, C. (2010). "Urban Farms vs. Urban Zoning." Ecology Center. Retrieved from <http://ecologycenter.org/terrainmagazine/spring-2010/urban-farms-vs-urban-zoning/>.

Mukherji, N., & Morales, A. (2010). "Zoning for urban agriculture." *Zoning Practice*, 27(3), 2-7. Retrieved from <http://www.planning.org/zoningpractice/2010/pdf/mar.pdf>.

Osborn, J. & Iggo, E. (2007, Jan). Constituent Letter to the City of San Diego Planning Department.

Reynolds, K.A. (2011). "Expanding technical assistance for urban agriculture: Best practices for extension services in California and beyond." *Journal of Agriculture, Food Systems, and Community Development*, 1(3) 197-216. Retrieved from <http://dx.doi.org/10.5304/jafscd.2011.013.013>.

San Francisco Administrative Code (2013). Chapter 53: Urban Agriculture. Retrieved from [http://www.amlegal.com/nxt/gateway.dll/California/ordtable/comprehensiveordinancelist?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:sanfrancisco_ca\\$sync=1](http://www.amlegal.com/nxt/gateway.dll/California/ordtable/comprehensiveordinancelist?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca$sync=1).

Smit, J., Ratta, A., & Nasr, J. UNDP (2001). "Urban Agriculture: Food, Jobs and Sustainable Cities." The Urban Agriculture Network, Inc. Retrieved from <http://www.jacsmit.com/book.html>.

Stringer, S. (2010). "FoodNYC: A Blueprint for a Sustainable Food System." Retrieved from http://www.mbp.org/uploads/policy_reports/mbp/FoodNYC.pdf.

Urban Farming (2012). "About Urban Farming." Retrieved from <http://www.urbanfarming.org/about.html>.

Ver Ploeg, M., Breneman, V., Farrigan, T., Hamrick, K., Hopkins, D., Kaufman, P., Lin, B., Nord, M., Smith, T., Williams, R., Kinnison, K., Olander, C., Singh, A., & Tuckermanty, E. (2009). "Access to

Affordable and Nutritious Food - Measuring and Understanding Food Deserts and Their Consequences: Report to Congress." US Department of Agriculture Administrative Publication No. (AP-036). Retrieved from http://webarchives.cdlib.org/wayback/public/UERS_ag_1/20111128200143/http://www.ers.usda.gov/Publications/AP/AP036/AP036.pdf.

Voigt, K.A. (2011). "Pigs in the backyard or the barnyard: Removing zoning impediments to urban agriculture." *Boston College Environmental Affairs Law Review*, 38(2) Retrieved from <http://lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?article=1699&context=ealr>.

Witt, B.L. (2013). Urban Agriculture Law Project, Community Law Center. Retrieved May 2, 2013 from <http://communitylaw.org/urbanagriculturelawproject/>.

Wooten, H. & Ackerman, A. (2012). *Seeding the City: Land Use Policies to Promote Urban Agriculture*. Retrieved from [http://changelabsolutions.org/sites/changelabsolutions.org/files/Urban_Ag_SeedingTheCity_FINAL_\(CLS_20120530\)_20111021.pdf](http://changelabsolutions.org/sites/changelabsolutions.org/files/Urban_Ag_SeedingTheCity_FINAL_(CLS_20120530)_20111021.pdf).

MAPPING URBAN AGRICULTURE: A SPATIAL SNAPSHOT

A Year-Long Look (2012). "A Year-Long Look at Community Gardens." Los Angeles Times. Retrieved from <http://www.latimes.com/features/home/la-hm-community-gardens-html,0,3177283.htmlstory>.

Hodgson, K., Campbell M.C., & Bailkey M. (2011). "Urban Agriculture: Growing Healthy, Sustainable Places." American Planning Association.

Simmons, K. (2009, July 29). "A New Crop of School Gardens is Growing." Los Angeles Times. Retrieved from <http://www.latimes.com/features/food/la-fo-garden29-2009jul29,0,6578924.story>.

Spurrier, J. (2010, September 29). "New weekly feature: soca's community gardens." Los Angeles Times. Retrieved from http://latimesblogs.latimes.com/home_blog/2010/09/community-gardens-los-angeles-california.html.

Taylor, John R. & Lovell, Sarah T. (2012). "Mapping Public and Private Spaces of Urban Agriculture in Chicago Through the Analysis of High-Resolution Aerial Images in Google Earth." *Landscape and Urban Planning* 108, 57-70.

SCHOOL GARDENS: LEARNING AND GROWING

Agee, J.L. (2002). "A Child's Garden of Standards: Linking School Gardens to California Education Standards, Grades Two Through Six." California Department of Education: Nutrition Services Division.

Bell, Anne C. (2001). *The Pedagogical Potential of School Grounds. Greening School Grounds: Creating Habits for Learning*. T. Grant and G. Littlejohn, eds. New Society Publishers. 9-11.

Brenner, Elizabeth & Pusey, John (1999). "Children's Gardens: A Field Guide for Teachers, Parents and Volunteers." University of California Cooperative Extension.

California Department of Education (2013). "School Garden Program Overview." California Department of Education. Retrieved from www.cde.ca.gov/ls/nu/he/gardenoverview.asp.

CSGN (2006). *Gardens for Learning: Creating and Sustaining Your School Garden*. California School Garden Network. Retrieved from <http://food-hub.org/files/resources/GFLBook.pdf>.

Dirks, A. E., & Orvis, K. (2005). An evaluation of the junior master gardener program in third grade classrooms. *HortTechnology*, 15(3), 443-447.

Garden School Foundation (2013). "About the Garden School Foundation." Garden School Foundation. Retrieved from www.gardenschoolfoundation.org/aboutus.

Graham, H., Beall, D. L., Lussier, M., McLaughlin, P., & Zidenberg-Cherr, S. (2005). Use of school gardens in academic instruction. *Journal of Nutrition Education and Behavior*, 37(3), 147-151.

Gray, Mary Richards (1913). "The Education of Children in the School Gardens of Los Angeles." *The Craftsman*, 472-479.

Gray, Mary Richards (1914). "How to Organize a School Garden." *School Arts Magazine*. (13) 489-495.

Higgins, A. (2011). California School Garden Network. Western Growers Foundation Awards School Garden Grants. Retrieved from <http://www.csgn.org/node/831>.

Klemmer, C. D., Waliczek, T. M., & Zajicek, J. M. (2005). Growing minds: The effect of a school gardening program on the science achievement of elementary students. *HortTechnology*, 15(3), 448-452.

LAUSD Facilities Services Division (2013). Facilities Services Division. LAUSD: Facilities Services Division. Facilities Initiatives: Green Spaces. Retrieved from <http://www.laschools.org/new-site/green-spaces/greening-projects/>.

Lawson, Laura J. (2005). *City Bountiful: A Century of Community Gardening in America*. Berkeley: University of California.

Legislative Counsel (2011). California Legislative Information. Legislative Counsel's Digest: Bill Information. Retrieved from www.leginfo.ca.gov/faces/billTextClient.xhtml.

Lieberman, Gerald A. & Hoody, Linda I. (1998). "The Achievement Gap: Using the Environment as an Integrating Context for Learning." State Education and Environment Roundtable.

Life Lab (2013). "Welcome to Life Lab." Life Lab Science Program. Retrieved from www.lifelab.org.

Louv, R. (2008). *Last child in the woods: Saving our children from nature-deficit disorder*. Algonquin Books

McAleese, J. D., & Rankin, L. L. (2007). Garden-based nutrition education affects fruit and vegetable consumption in sixth-grade adolescents. *Journal of the American Dietetic Association*, 107(4), 662-665.

Morris, J. L., Briggs, M., & Zidenberg-Cherr, S. (2002). Development and evaluation of a garden-enhanced nutrition education curriculum for elementary school children. *Journal of Child Nutrition Management*, 26(2).

Murphy, Michael & Schweers, Erin (2003). "Evaluation of a Food Systems-based Approach to Fostering Ecological Literacy." Center for Ecoliteracy.

Pothukuchi, K. (2004). Hortaliza: A youth "nutrition garden" in southwest Detroit. *Children Youth and Environments*, 14(2), 124-155.

Ratcliffe, M. M., Merrigan, K. A., Rogers, B. L., & Goldberg, J. P. (2011). The effects of school garden experiences on middle school-aged students' knowledge, attitudes, and behaviors associated with vegetable consumption. *Health Promotion Practice*, 12(1), 36-43.

Smith, L. L., & Motsenbocker, C. E. (2005). Impact of hands-on science through school gardening in Louisiana public elementary schools. *HortTechnology*, 15(3), 439-443.

UCCE (2013). Gardening with the Common Ground Garden Program. Regents of the University of California, University of California Cooperative Extension in Los Angeles County. Retrieved from celosangeles.ucdavis.edu/Common_Ground_Garden_Program.

UCCE (2013). Master Gardener Volunteer Training Program. University of California Cooperative Extension in Los Angeles County. Retrieved from http://www.celosangeles.ucdavis.edu/Common_Ground_Garden_Program/Master_Gardener_Volunteer_Training_Program.

United States. Office of Education. (1916). *Report of the Commissioner of Education*. Washington Government Printing Office, 1, 1-169.

Watters, Sam (2012). "Lost LA: School Gardens, an Idea Planted a Century Ago." Los Angeles Times. Retrieved from http://latimesblogs.latimes.com/home_blog/2012/02/lost-la-school-gardens.html.

ECONOMICS AND GEOGRAPHY OF THE ALTADENA FARMERS MARKET: HOTSPOT OR NOT?

Altieri, M. (2009). Agroecology, small farms, and food sovereignty. *Monthly Review*, 61(3), 102–113.

American Apparel (2013). Vertical Integration. American Apparel official website. Retrieved May 11, 2013. <http://www.americanapparel.net/aboutus/verticalint/>.

Boggs, J. S., & Rantisi, N. M. (2003). The "relational turn" in economic geography. *Journal of Economic Geography*, 3(2), 109–116. doi:10.1093/jeg/3.2.109.

California Department of Food and Agriculture (2013). Certified Farmers Market Program. Retrieved from http://www.cdfa.ca.gov/is/i_&c/cfm.html.

Desmarais, A. A. (2007). *La Via Campesina: Globalization and the Power of Peasants*. USA: Pluto Press.

Duranton, G., & Puga, D. (2004). Micro-foundations of urban agglomeration economies. *Handbook of regional and urban economics*, 4, 2063–2117.

Estabrook, B. (2011). *Tomatoland: How Modern Industrial Agriculture Destroyed Our Most Alluring Fruit* (First Edition.). Andrews McMeel Publishing.

Feldman, M. P. (2000). "Location and Innovation: The New Economic Geography of Innovation, Spillovers, and Agglomeration." in G. Clark, M. Feldman and M. Gertler, editors. *The Oxford Handbook of Economic Geography*. Oxford: Oxford University Press. pp. 373-394.

Fitting, E. (2011). *The Struggle for Maize: Campesinos, Workers, and Transgenic Corn in the Mexican Countryside*. Duke University Press Books.

Horrigan, L., Lawrence, R. S., & Walker, P. (2002). How sustainable agriculture can address the environmental and human health harms of industrial agriculture. *Environmental health perspectives*, 110(5), 445.

Jensen, J. B., & Kletzer, L. G. (2005). Tradable Services: Understanding the Scope and Impact of Services Offshoring. *Brookings Trade Forum*, 2005(1), 75–116. doi:10.1353/btf.2006.0014.

Kimbrell, A. (2002). *The Fatal Harvest Reader: The Tragedy of Industrial Agriculture*. Washington, DC: Island Press.

Krugman, P. (1998). What's new about the new economic geography? *Oxford Review of Economic Policy*, 14(2), 7–17. doi:10.1093/oxrep/14.2.7.

Krugman, P., & Wells, R. (2008). *Microeconomics* (2nd ed.). New York City: Worth Publishers.

Moretti, E. (2012). *The New Geography of Jobs*. New York: Mariner Books.

Patel, R. (2013). *Stuffed And Starved: From Farm to Fork: The Hidden Battle For The World Food System*. Portobello Books.

Pollan, M. (2007). *The Omnivore's Dilemma: A Natural History of Four Meals*. Penguin.

Pollan, M. (2008, October 12). Farmer in Chief. The New York Times. Retrieved from <http://www.nytimes.com/2008/10/12/magazine/12policy-t.html>.

Schlosser, E. (2001). *Fast Food Nation: The Dark Side of the All-American Meal* (Reprint.). Mariner Books.

Soja, E. W. (2000). *Postmetropolis: Critical Studies of Cities and Regions* (1st ed.). Malden, MA: Wiley-Blackwell.

Storper, M., & Venables, A. J. (2004). Buzz: face-to-face contact and the urban economy. *Journal of Economic Geography*, 4(4), 351–370. doi:10.1093/jnlecg/lbh027.

Storper, M. (2011). [Review of the Book *Triumph of the City*, by E. Glaeser]. *Journal of Economic Geography*, 11(6), 1079–1082. doi:10.1093/jeg/lbr026

Storper, M. (2013). *Keys to the City: How Economics, Institutions, Social Interaction, and Politics Shape Development*. Princeton University Press.

Wagenvoort, H. C. (2004). The High Price of Cheap Food. Mealpolitik over lunch with Michael Pollan. Retrieved from <http://michaelpollan.com/profiles/the-high-price-of-cheap-food-mealpolitik-over-lunch-with-michael-pollan/>.

Walker, R., & Storper, M. (1991). *The Capitalist Imperative: Territory, Technology and Industrial Growth* (1st ed.). Wiley-Blackwell.

Wai-chung Yeung, H. (2003). Practicing new economic geographies: a methodological examination. *Annals of the Association of American Geographers*, 93(2), 442–462.

Worthen, B. (2010). A Dozen Eggs for \$8? Michael Pollan Explains the Math of Buying Local. *Wall Street Journal*. Retrieved from <http://online.wsj.com/article/SB10001424052748704271804575405521469248574.html>.

DISTRIBUTION STRATEGIES FOR URBAN FARMERS

Barham, J., Tropp, D., Enterline, K., Farbman, J., Fisk, J., & Kiraly, S. (2012). "Regional Food Hub Resource Guide: Food Hub Impacts on Regional Food Systems, and the Resources Available to Support Their Growth and Development." United States Department of Agriculture, Agricultural Marketing Service.

Brenneis, L., Cardenas, E., Cech, S., Cochran, J., Gross, J., Malone, B., Reinbold, J., Sierra, L., & Zajfen, V. (2010). "A California Network of Regional Food Hubs: A Vision Statement and Strategic Implementation Plan." Regional Food Hub Advisory Council, USDA's Risk Management Agency, Roots of Change, and the Urban and Environmental Policy Institute at Occidental College.

California Department of Food and Agriculture (2013). "California Agricultural Production Statistics." Retrieved from <http://www.cdffa.ca.gov/statistics/>.

City-Data (2013). Retrieved from http://www.city-data.com/county/Los_Angeles_County-CA.html.

Cook, Chris, Matson, J. & Sullins, M. (2013). "The Role of Food Hubs in Local Food Marketing." United States Department of Agriculture, Agricultural Market Service.

Diamond, A., Dicken, C., Lohr, L., & Marquardt, D. (2011). "Mapping Competition Zones for Vendors and Customers in U.S. Farmers Markets." U.S. Dept. of Agriculture, Agricultural Marketing Service.

Hodgson, K., Campbell, M. C., & Bailkey, M. (2011). "Urban agriculture: Growing healthy, sustainable places." APA Advisory Service.

LA Food Policy Council (2012). "Building a Healthy Food System for Los Angeles: Strategic Priorities 2012-2013." Good Food Office, Los Angeles Food Policy Council, City of Los Angeles.

Ojai Pixie Growers Association (2013). Retrieved from <http://www.pixietangerine.com/index.htm>

Orsi, R. J. (1975). "The Octopus Reconsidered: The Southern Pacific and Agricultural Modernization in California, 1865-1915." *California Historical Quarterly*, 54(3), 197-220.

Rotenberk, Lori. (2013). "Local Food - Put a Sticker on it!" *Grist*. Retrieved from <http://grist.org/food/local-food-put-a-sticker-on-it/>.

Thompson, E., Harper, A.M., & Kraus, S. (2008). "Think Globally - Eat Locally: San Francisco Foodshed Assessment." American Farmland Trust.

Unger, S. & Wooten, H. (2006). "A Food Systems Assessment For Oakland, CA: Toward a Sustainable Food Plan." Oakland Mayor's Office of Sustainability and University of California, Berkeley, Department of City and Region Planning.

USDA (2010). "Regional Food Hubs: Linking Producers to New Markets." Know Your Farmer, Know Your Food (KYF2) Regional Food Hub Subcommittee, United States Department of Agriculture. May 24, 2010.

Zajfen, V. (2008). "Fresh Food Distribution Models for the Greater Los Angeles Region." Center for Food & Justice, a division of the Urban & Environmental Policy Institute, Occidental College.

APPENDIX I - LAND USE REGULATION

*A: Urban Agriculture Zoning and Municipal Codes
in Los Angeles County*

APPENDIX II - MAPPING URBAN AGRICULTURE

*A: Chart of Inventory Resources
B: Maps of Agriculture sites in Los Angeles County
C: Trends*

APPENDIX III - ECONOMICS AND GEOGRAPHY

*A: Map Sources for the Economics and Geography of the Altadena
Farmers' Market*

Guide to Reading the Appendix

This appendix is arranged in alphabetical order by city. If an agricultural category (as listed in the Urban Agricultural Reference Chart) is regulated, the category is shown in bold with the term used by that city in parentheses. Below the category is the location of the regulation(s) of the category within that city's municipal code.

A. URBAN AGRICULTURE ZONING AND MUNICIPAL CODES IN LOS ANGELES COUNTY

AGOURA HILLS

Agricultural Waste (Green Waste, Compost)

Sanitation and Health. Chapter 3. Part 1. 5301. Definitions.

Sanitation and Health. Chapter 3. Part 4. 4319. Residential householder exclusions.

Fowl

Sanitation and Health. Chapter 1. 5101. Keeping animals and birds.

Zoning. Chapter 2. Part 3. 9224.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 4. 9234.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 5. 9244.1. Livestock and poultry raising standards.

Zoning. Chapter 4. Part 8. 9489.1. Livestock and poultry raising standards.

Fruit/Vegetable (Crops, Vegetables)

Zoning. Chapter 2. Part 3. 9222.1. Permitted uses.

Zoning. Chapter 2. Part 3. 9222.2. Accessory uses.

Zoning. Chapter 2. Part 4. 9232.2. Accessory uses.

Zoning. Chapter 2. Part 5. 9242.2. Accessory uses.

Zoning. Chapter 2. Part 6. 9252.2. Accessory uses.

Zoning. Chapter 2. Part 8. 9272.2. Accessory uses.

Garden

Zoning. Chapter 2. Part 3. 9222.2. Accessory uses.

Zoning. Chapter 2. Part 4. 9232.2. Accessory uses.

Zoning. Chapter 2. Part 5. 9242.2. Accessory uses.

Zoning. Chapter 2. Part 8. 9272.2. Accessory uses.

Goats

Zoning. Chapter 2. Part 3. 9224.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 4. 9234.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 5. 9244.1. Livestock and poultry raising standards.

Zoning. Chapter 4. Part 8. 9489.1. Livestock and poultry raising standards.

Horticulture

Zoning. Chapter 2. Part 3. 9222.2. Accessory uses.

Zoning. Chapter 2. Part 4. 9232.2. Accessory uses.

Zoning. Chapter 2. Part 5. 9242.2. Accessory uses.

Zoning. Chapter 2. Part 8. 9272.2. Accessory uses.

Heavy Livestock (cattle, sheep)

Zoning. Chapter 2. Part 3. 9224.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 4. 9234.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 5. 9244.1. Livestock and poultry raising standards.

Zoning. Chapter 4. Part 8. 9489.1. Livestock and poultry raising standards.

Public Peace. Chapter 9. 4905. Animals in parks

Horses

Zoning. Chapter 2. Part 3. 9224.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 4. 9234.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 5. 9244.1. Livestock and poultry raising standards.

Zoning. Chapter 4. Part 8. 9489.1. Livestock and poultry raising standards.

Public Peace. Chapter 9. 4905. Animals in parks

Nursery

Zoning. Chapter 5. Part 6. 9552.1. Permitted uses within the buildable area of commercial lots.

Pig (Pig, Hog, Swine)

Zoning. Chapter 2. Part 3. 9224.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 4. 9234.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 5. 9244.1. Livestock and poultry raising standards.

Zoning. Chapter 4. Part 8. 9489.1. Livestock and poultry raising standards.

Public Peace. Chapter 9. 4905. Animals in parks

Rabbit

Zoning. Chapter 2. Part 3. 9224.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 4. 9234.1. Livestock and poultry raising standards.

Zoning. Chapter 2. Part 5. 9244.1. Livestock and poultry raising standards.

Zoning. Chapter 4. Part 8. 9489.1. Livestock and poultry raising standards.

ALHAMBRA

Bees

Animals. 7.08.010. Keeping bee hives; number

Animals. 7.08.011. Keeping bee hives; distance from residence

Fowl (chickens, geese, ducks, turkeys, roosters)

Animals. 7.12.011. Quantity and age.

Animals. 7.12.040. Sale or display as pet or novelty.

Animals. 7.12.050. Sale or display as food.

Animals. 7.12.060. Roosters.

Animals. 7.12.070. Distance to be kept from street and property lines

Garden

Zoning. 23.44.050. Conditions of approval

Goat

Animals. 7.04.010. Animals running at large.

Animals. 7.08.060. Cows, horses, mules and goats

Heavy Livestock (livestock)

Animals. 7.04.010. Animals running at large.

Animals. 7.08.060. Cows, horses, mules and goats.

Horse

Animals. 7.04.010. Animals running at large.

Animals. 7.08.060. Cows, horses, mules and goats.

Horticulture

Zoning. 23.58.030. Operating standards.

Nursery (plant nursery)

Zoning. 23.32.020. Permitted uses.

Pig (Hog)

Animals. 7.04.010. Animals running at large.

Animals. 7.08.070. Pigs and hogs

Rabbit

Animals. 7.12.040. Sale or display as pet or novelty.

Animals. 7.12.050. Sale or display as food.

Animals. 7.12.070. Distance to be kept from street and property lines

ARCADIA

Bees

Public Welfare, Morals and Policy. 4137.4 Bees prohibited.

Fowl (poultry, chickens)

Public Welfare, Morals and Policy. 4136. Keeping restricted.

Public Welfare, Morals and Policy. 4137.3. Control of rabbits, poultry and fowl.

Businesses, Professions, Trades and Occupations. 6422. Keeping of poultry and animals.

Division and Use of Land (zoning). 9250.2.3. Small animal and fowl.

Division and Use of Land (zoning). 9251.1.4. Small animals and fowl.

Division and Use of Land (zoning). 9252.1.4. Small animals and fowl.

Fruit/Vegetable (Crops)

Division and Use of Land (zoning). 9250.2.2. Crops.

Division and Use of Land (zoning). 9251.1.3. Crops.

Division and Use of Land (zoning). 9252.1.3. Crops.

Goat

Public Welfare, Morals and Policy. 4135.2. Public places.

Division and Use of Land (zoning). 9250.2.3. Small animal and fowl.

Division and Use of Land (zoning). 9251.1.4. Small animals and fowl.

Division and Use of Land (zoning). 9252.1.4. Small animals and fowl.

Heavy Livestock (cow, sheep, bulls)

Public Welfare, Morals and Policy. 4135. Staking restricted.

Division and Use of Land (zoning). 9250.2.3. Small animal and fowl.

Division and Use of Land (zoning). 9251.1.4. Small animals and fowl.

Division and Use of Land (zoning). 9252.1.4. Small animals and fowl.

Horses (Equine)

Division and Use of Land. (zoning). 9251.1.4. Small animals and fowl.

Division and Use of Land (zoning). 9252.1.4.1. Equine animals.

Public Welfare, Morals and Policy. 4135.4. Equine and other animal location requirements

Horticulture

Division and Use of Land (zoning). 9250.2.2. Crops.

Division and Use of Land (zoning). 9251.1.3. Crops.

Division and Use of Land (zoning). 9252.1.3. Crops.

Pig (Hog)

Public Welfare, Morals and Policy. 4137.5. Hogs prohibited.

Rabbit

Public Welfare, Morals and Policy. 4136. Keeping restricted.

Public Welfare, Morals and Policy. 4137.3. Control of rabbits, poultry and fowl.

Businesses, Professions, Trades and Occupations. 6422. Keeping of poultry and animals.

Division and Use of Land (zoning). 9250.2.3. Small animals and fowl.

Division and Use of Land (zoning). 9251.1.4. Small animals and fowl.

Division and Use of Land (zoning). 9252.1.4. Small animals and fowl.

ARTESIA

Aquaculture

Planning and Zoning. 9-2.3402. Permitted and conditionally permitted uses.

Fowl (chicken, hens, ducks)

Planning and Zoning. 9-2.2703. Accessory uses permitted (A-1).

Fruit/Vegetable

Planning and Zoning. 9-2.2703. Accessory uses permitted (A-1).

Garden

Planning and Zoning. 9-2.2703. Accessory uses permitted (A-1).

Goat

Planning and Zoning. 9-2.2703. Accessory uses permitted (A-1).

Heavy Livestock (cows)

Planning and Zoning. 9-2.2703. Accessory uses permitted (A-1).

Horse

Planning and Zoning. 9-2.2703. Accessory uses permitted (A-1).

Nursery

Zoning 9-2.3205. Development standards (C-G).

Pig

Sanitation and Health. 6-1.04. Amendments to animal control ordinance.

Rabbit

Planning and Zoning. 9-2.2703. Accessory uses permitted (A-1).

AVALON

Fowl (fowl)

Sanitation and Health. 6-1.111. Restricted Areas.

Vegetable (Special landscaped area)

Sanitation and Health. 6-12.01. Definitions.

AZUSA

Fowl (chicken, fowl)

Offenses and Miscellaneous Provisions. Sec. 46-410. - Prohibited noise.

Development Code. 88.42.040. - Animal Keeping.

Fruit/Vegetable (crop)

Development Code. 88.28.030. - Special Purpose Zone Land Uses and Permit Requirements.

Goat

Development Code. 88.42.040. - Animal Keeping.

Horse

Development Code. 88.42.040. - Animal Keeping.

Horticulture

Development Code. 88.28.030. - Special Purpose Zone Land Uses and Permit Requirements.

Livestock (cow, goat)

Development Code. 88.42.040. - Animal Keeping.

Nursery

Development Code. 88.28.030. - Special Purpose Zone Land Uses and Permit Requirements.

Pigs

Development Code. 88.42.040. - Animal Keeping.

Rabbits

Development Code. 88.42.040. - Animal Keeping.

BALDWIN PARK

Agricultural Waste (compost)

Public Works. 50.03 Storage and disposal of refuse and recyclable materials.

Fowl (fowl, hen, roosters)

General Offenses. 130.37 Special Noises

Zoning. 153.120.140 – Permitted Animals

Garden (rooftop gardens)

Zoning. 153.070.050 – Required Residential Open Space

BELL

Heavy Livestock (dairy)

Zoning. 17.96.030. Conditional Use Permits

Nursery

Zoning. 17.32.020. Permitted Uses
Zoning. 17.36.020. Permitted Uses
Zoning. 17.40.020. Permitted Uses

BELL GARDENS

Bees (bees)

15.05.010 Bees

Fowl (fowl, chicken)

Residential Zone. Table 9.10A: Residential Land Use Matrix
Noise Regulation. 16.24.100 Animals and fowl – Restriction.
Fruit/Vegetable (fruit, vegetable, crops)

Industrial Zone. Table 9.14A: Industrial Land Use Matrix

Fruit/Vegetable (fruit, vegetable, crops)

Residential Zones. Table 9.10A: Residential Land Use Matrix

Goat

Residential Zone. Table 9.10A: Residential Land Use Matrix
Animals and Pound. 15.04.420 Running at large prohibited – Other animals.

Horse

Residential Zone. Table 9.10A: Residential Land Use Matrix
Open Space Zone. Table 9.08A: Open Space Land Use Matrix
Animals and Pound. 15.04.420 Running at large prohibited – Other animals.

Heavy Livestock (ox, sheep, cattle, cow)

Residential Zone. Table 9.10A: Residential Land Use Matrix
Animals and Pound. 15.04.420 Running at large prohibited – Other animals.

Nursery (nurseries)

Commercial Zone. Table 9.12A: Commercial Land Use Matrix

Pig (swine)

Residential Zone. Table 9.10A: Residential Land Use Matrix

BELLFLOWER

Fish (fish)

Zoning. 17.20.030 Agricultural Uses.

Fowl (fowl, poultry, chicken, rooster, turkey, hen, goose, pheasant, egg)

Zoning. 17.20.030 Agricultural Uses.

Fruit/Vegetable (fruit, vegetable)

Zoning. 17.24.020 Permitted Uses.

Garden (gardens)

Zoning. 17.24.020 Permitted Uses.

Goat (goats)

Zoning. 17.20.030 Agricultural Uses.

Rabbit (rabbits)

Zoning. 17.20.030 Agricultural Uses.

Heavy Livestock (cattle, sheep)

Zoning. 17.20.030 Agricultural Uses.

Horse (horses)

Zoning. 17.20.030 Agricultural Uses.

Horticulture (horticultural, flower)

Zoning. 17.24.020 Permitted Uses

Zoning. 17.16.020 Permitted Uses.

Nursery (nursery)

Zoning. 17.20.030 Agricultural Uses.

BEVERLY HILLS

Bees

Public Health. 5-2-109. Keeping Bees Prohibited

Fowl

Public Health. 5-2-101. Keeping of certain animals, fowl, and reptiles prohibited

BRADBURY

Bees (apiaries)

Zoning Districts and Allowable Land Uses. 9.05.040.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.050.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.060.020. Permitted Uses

Fish (fish)

Zoning Districts and Allowable Land Uses. 9.05.040.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.050.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.060.020. Permitted Uses

Fowl (fowl)

Zoning Districts and Allowable Land Uses. 9.05.040.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.050.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.060.020. Permitted Uses

Fruit/Vegetable (crops, vegetable)

Zoning Districts and Allowable Land Uses. 9.05.020.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.030.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.040.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.050.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.060.020. Permitted Uses

Heavy Livestock (cattle, sheep)

Zoning Districts and Allowable Land Uses. 9.05.040.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.050.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.060.020. Permitted Uses

Horses

Zoning Districts and Allowable Land Uses. 9.05.040.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.050.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.060.020. Permitted Uses

Horticulture (flower)

Zoning Districts and Allowable Land Uses. 9.05.020.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.030.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.040.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.050.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.060.020. Permitted Uses

Nursery

Zoning Districts and Allowable Land Uses. 9.05.020.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.030.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.040.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.050.020. Permitted Uses

Zoning Districts and Allowable Land Uses. 9.05.060.020. Permitted Uses

BURBANK

Bees (Hives)

Animals. 5-1-305. Keeping of Bees

Fowl (fowl, rooster, poultry)

Animals. 5-1-301: Keeping of Certain Non Domestic Animals Prohibited (roosters)

Animals. 5-1-304: Keeping of Birds, Fowl, Rabbits and Chinchillas on

Residential Property

Environmental Protection. 9-3-207. Animals and Fowl

Health. 4-1-401. Rodents, Flies, and Vermin

Goat (goats)

Animals. 5-1-301: Keeping of Certain Non Domestic Animals Prohibited

Animals. 5-1-308. Keeping of Pygmy Goats

Heavy Livestock (sheep, cow)

Animals. 5-1-301: Keeping of Certain Non Domestic Animals Prohibited (sheep, cow)

Horse (horse)

Animals. 5-1-515. Necessity for Horse Registration; Exception
Animals. 5-1-516. Application for Horse Registration, Fees
Animals. 5-1-517. Horse Registration to be Posted
Zoning. 10-1-2456. Number of Horses to be Kept in Commercial Stable
Zoning. 10-1-507. Keeping of Horses, Stables and Corrals
Zoning. 10-1-605.E. Restrictions on Keeping Horses

Nursery (nursery)

Zoning. Table 10-1-602. Permitted Uses in the R-1 and R-1-H Zones
Zoning. 10-1-502. City of Burbank Zoning Use List
Pig (pigs)
Animals. 5-1-307. Keeping of Pigs

Rabbit

Animals. 5-1-304: Keeping of Birds, Fowl, Rabbits and Chinchillas on Residential Property
Health. 4-1-401. Rodents, Flies, and Vermin

CALABASAS

Agricultural Waste (green waste, compost)

Health and Safety. 8.16.670 - Exclusion of owners of residential property

Farm

Land Use and Development. 17.12.110 - Hobby farms

Fowl (chicken)

Land Use and Development. 17.12.040 - Animal raising and keeping.

Fruit/Vegetable (crops)

Land Use and Development. 17.12.030 - Agricultural uses.

Heavy Livestock (cows, sheep)

Land Use and Development. 17.12.040 - Animal raising and keeping.

Goat (Goats)

Land Use and Development. 17.12.040 - Animal raising and keeping.

Horse (Horses, Equestrian)

Land Use and Development. 17.12.040 - Animal raising and keeping.

Horticulture

Health and Safety. 8.28.125 - Storm water pollution prevention requirements for new development and redevelopment projects.

Nursery (nurseries)

Land Use and Development. 17.14.010 - Purpose.

Pig

Land Use and Development. 17.12.040 - Animal raising and keeping.

Rabbit (rabbits)

Land Use and Development. 17.12.040 - Animal raising and keeping.

CARSON

Agricultural Waste (compost, mulch)

Division 8. Special Requirements For Certain Uses. 9138.18.J. Design Guidelines and Sustainable Standards

Farm (Farm, Earthworm farm, Mushroom farm)

9151.1 Uses Permitted.

9141.1 Uses Permitted.

Fowl (fowl, chickens, turkeys, geese)

Planning and Zoning. 9122.3 Animal Keeping.

Fruit/Vegetable (field crops)

Planning and Zoning. 9121.1 Uses Permitted.

Planning and Zoning. 9131.1 Uses Permitted.

Planning and Zoning. 9151.1 Uses Permitted.

Goat (goats)

Planning and Zoning. 9122.3 Animal Keeping.

Heavy Livestock (cows, sheep)

Planning and Zoning. 9122.3 Animal Keeping.

Horse (horses)

Planning and Zoning. 9122.3 Animal Keeping.

Horticulture (flowers)

Planning and Zoning. 9121.1 Uses Permitted.

Planning and Zoning. 9131.1 Uses Permitted.

Planning and Zoning. 9151.1 Uses Permitted.

Nursery (nursery)

Planning and Zoning. 9121.1 Uses Permitted.

Planning and Zoning. 9131.1 Uses Permitted.

Planning and Zoning. 9151.1 Uses Permitted.

Pig (pigs, hogs)

Planning and Zoning. 9122.3 Animal Keeping.

Rabbits

Planning and Zoning. 9122.3 Animal Keeping.

CERRITOS

Fish (fish)

Development Plan. 22.21.300 Permitted uses—Five acre site.

Fowl (poultry)

Development Plan. 22.21.300 Permitted uses—Five acre site.

Fruit/Vegetable (crops)

Development Plan. 22.21.300 Permitted uses—Five acre site.

Development Plan. 22.21.320 Permitted uses—Two acre site.

Development Plan. 22.30.350 Conditional uses.

Garden

Development Plan. 22.23.700 Site development standards.

Goat

Development Plan. 22.21.300 Permitted uses—Five acre site.

Heavy Livestock (cattle, sheep, dairy)

Development Plan. 22.21.300 Permitted uses—Five acre site.

Horse (horses)

Development Plan. 22.21.300 Permitted uses—Five acre site.

Development Plan. 22.30.350 Conditional uses.

Horticulture (flower)

Development Plan. 22.30.350 Conditional uses.

Nursery (nurseries)

Development Plan. 22.21.300 Permitted uses—Five acre site.

Development Plan. 22.21.320 Permitted uses—Two acre site.

Development Plan. 22.30.350 Conditional uses.

Pig (pigs)

Development Plan. 22.21.500 Prohibited uses.

Rabbit (rabbits)

Development Plan. 22.21.300 Permitted uses—Five acre site.

CLAREMONT

Agricultural Waste (compost)

Garbage and Solid Waste. 8.08.255 Composting permitted.

Bees (apiaries)

Animals. 6.24.030. Permit required for keeping bees

Animals. 6.24.040. Requirement of permit for keeping bees

Fowl (fowl, chicken, goose, turkey)

Animals. 6.20.030. Permitted number of animals

Animals. 6.20.060. Roosters prohibited

Fruit/Vegetable (crops, fruit)

Zoning. 16.001.010. Uses and development permitted

Zoning. 16.004.010. Permitted uses

Zoning. 16.007.010. Permitted uses

Zoning. 16.019.010. Permitted uses

Goat

Animals. 6.20.030. Permitted number of animals

Zoning. 16.004.010. Permitted uses

Heavy Livestock (cattle, sheep)

Animals. 6.20.030. Permitted number of animals

Zoning. 16.004.010. Permitted uses

Horse

Animals. 6.20.030. Permitted number of animals

Zoning. 16.004.010. Permitted uses

Zoning. 16.016. Equestrian Overlay District

Pig (swine)

Animals. 6.20.050. Swine prohibited

COMMERCE

Agricultural Waste (composting)

Peace, Safety and Morals. 9.32.040. Public nuisances prohibited.

Bees (bees, hive)

Animals. 8.04.560. Bees

Fowl (Hens, chickens, geese, turkeys, pheasants)

Animals. 8.04.520. Fowls and rabbits-Keeping

Goat (goats)

Animals. 8.04.510. Prohibited animals

Heavy Livestock (cows, horses, sheep)

Animals. 8.04.510. Prohibited animals

Nursery (nursery)

Zoning. Table 19.13.020A. Permitted Uses—Public Facility Zone

Zoning. Table 19.09.010A. Permitted Uses—Commercial Zone

Pig (hogs, pigs, swine)

Animals. 8.04.510. Prohibited animals

Rabbit (rabbits)

Animals. 8.04.520. Fowls and rabbits-Keeping

COMPTON

Agricultural Waste (worm farm)

Zoning. 30-7.2. Uses (R-A)

Bee (bee, hive, apiary)

Zoning. 30-7.2. Uses (R-A)

Animals, 10.76 Apiaries (Los Angeles County Code)

Fowl (fowl, poultry, egg)

Zoning. 30-7.2. Uses (R-A)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Fruit/Vegetable (crops)

Zoning. 30-7.2. Uses (R-A)

Garden (community garden)

Zoning. 30-18.4. Development Regulations (D)

Goat (goat)

Zoning. 30-7.2. Uses (R-A)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.020 Importation permit-Required when-Stockyard and animal-care standards (Los Angeles County Code)

Heavy Livestock (livestock, cattle, sheep)

Zoning. 30-7.2. Uses (R-A)

Animals, 10.32.040-050 Animals running at large (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.60 Tuberculosis control (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Horse (horse, equine)

Zoning. 30-7.2. Uses (R-A)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Horticulture (horticultural nurseries)

Zoning. 30-7.2. Uses (R-A)

Nursery (horticultural nurseries)

Zoning. 30-7.2. Uses (R-A)

Pig (pig, hog, swine)

Zoning. 30-7.2. Uses (R-A)

Animals, 10.28.061-062 Keeping and breeding pygmy pigs - License required (Los Angeles County Code)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.52 Stockyards and hog ranches (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Animals, 10.90.010 Licensing fees schedule (Los Angeles County Code)

Rabbit (rabbit)

Zoning. 30-7.2. Uses (R-A)

Animals, 10.40 General requirements (Los Angeles County Code)

COVINA

Farm (farm)

Zoning. 17.08.010 Permitted uses

Zoning. 17.08.060 Lot area

Fowl (fowl, chicken, turkeys, pheasant, duck, geese)

Noise. 9.40.120 Loud and/or unusual noises.

Zoning. 17.12.020 Permitted uses

Zoning. 17.14.020 Permitted uses

Zoning. 17.20.020 Permitted uses

Fruit/vegetable (crops, fruit, berry)

Zoning. 17.08.010 Permitted uses

Zoning. 17.12.020 Permitted uses

Zoning. 17.14.020 Permitted uses

Goats

Zoning. 17.14.020 Permitted uses

Zoning. 17.12.020 Permitted uses

Heavy Livestock (Cattle, sheep)

Zoning. 17.12.020 Permitted uses

Zoning. 17.14.020 Permitted uses

Horse

Zoning. 17.12.020 Permitted uses

Horticulture (flower)

Zoning. 17.08.010 Permitted uses

Nursery

Zoning. 17.44.020 Permitted uses

Zoning. 17.46.020 Permitted uses

Pig (Vietnamese Pot Bellied Pig)

Zoning. 17.12.020 Permitted uses

Zoning. 17.14.020 Permitted uses

Rabbit (rabbits)

Zoning. 17.14.020 Permitted uses

CUDAHY

Bee (bee, hive, apiary)

Animals, 10.76 Apiaries (Los Angeles County Code)

Fowl (fowl, poultry, egg)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Goat (goat)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.020 Importation permit-Required when-Stockyard and animal-care standards (Los Angeles County Code)

Heavy Livestock (livestock, cattle, sheep)

Animals, 10.32.040-050 Animals running at large (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.60 Tuberculosis control (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Horse (horse, equine)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Pig (pig, hog, swine)

Animals, 10.28.061-062 Keeping and breeding pygmy pigs - License required (Los Angeles County Code)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.52 Stockyards and hog ranches (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Animals, 10.90.010 Licensing fees schedule (Los Angeles County Code)

Rabbit (rabbit)

Animals, 10.40 General requirements (Los Angeles County Code)

CULVER CITY

Bees (bees, apiary)

Animals and Fowl. 9.01.050 Apiary or riding academy; permit required
Nuisances. 9.04.025. Nuisances affecting public safety, dangerous conditions, fire hazards, and the like

Fowl (fowl, poultry)

Animals and Fowl. 9.01.020. Animals other than household pets; permit required; business exclusion

Animals and Fowl. 9.01.045. Animals and fowl in or near certain establishments prohibited

Animals and Fowl. 9.01.035. Animal annoyance prohibited

Garden (garden)

Zoning. 17.400.060. Live/work development standards

Goat (goat)

Animals and Fowl. 9.01.020. Animals other than household pets; permit required; business exclusion

Heavy Livestock (cow, sheep, livestock)

Animals and Fowl. 9.01.020. Animals other than household pets; permit required; business exclusion

Horse (horse)

Animals and Fowl. 9.01.020. Animals other than household pets; permit required; business exclusion

Nursery

Zoning. 17.220.015. Commercial district land uses and permit requirements

Zoning. 17.230.015. Industrial District land uses and permit requirements

Zoning. 17.400.055. Prohibited home occupations

Pig (pig, hog, swine)

Animals and Fowl. 9.01.020. Animals other than household pets; permit required; business exclusion

Rabbit (rabbits)

Animals and Fowl. 9.01.045. Animals and fowl in or near certain establishments prohibited

Animals and Fowl. 9.01.020. Animals other than household pets; permit required; business exclusion

DIAMOND BAR

Agricultural Waste (compost)

Health and Safety. 8.16.570. Backyard residential composting

Bee (bees, apiary, hive)

Animals. 6.04. Apiaries

Health and Safety. 8.25.040. Vector control measures

Fowl (fowl)

Animals. 6.16.020. [License] required for certain activities

Fruit/Vegetable (crop)

Development Code. 22.12.030. Special purpose district land use and permit requirements

Goat (wild animal)

Animals. 6.16.020. [License] required for certain activities

Heavy Livestock (wild animal)

Animals. 6.16.020. [License] required for certain activities

Horse

Animals. 6.16.020. [License] required for certain activities

Development Code. 22.42.030. Animals as pets

Nursery (nursery)

Development Code. 22.10.030. Commercial/industrial district land uses and permit requirement

Pig (wild animal)

Animals. 6.16.020. [License] required for certain activities

Rabbit (wild animal)

Animals. 6.16.020. [License] required for certain activities

DOWNEY

Fowl (wild animal)

Public Welfare, Morals and Policy. 4605. Animals, birds, and fowl

Public Welfare, Morals and Policy. 4263. Noisy animals

Fish

Public Welfare, Morals and Policy. 4272.1 Permit for wild or vicious animal

Goat (wild animal)

Public Welfare, Morals and Policy. 4272.1 Permit for wild or vicious animal

Heavy Livestock (wild animal)

Public Welfare, Morals and Policy. 4272.1 Permit for wild or vicious animal

Horse (wild animal)

Public Welfare, Morals and Policy. 4272.1 Permit for wild or vicious animal

Nursery (nurseries)

Land Use. 9314.04 Commercial Zones use regulations

Pig (wild animal)

Public Welfare, Morals and Policy. 4272.1 Permit for wild or vicious animal

Rabbit (wild animal)

Public Welfare, Morals and Policy. 4272.1 Permit for wild or vicious animal

DUARTE

Agricultural Waste (composting)

Health and Sanitation. 6.08.030. Unlawful to deposit or bury

Bees (apiary, bees)

Animals. 8.04.560. Bees

Development Code. 19.20.020. Open space zone land uses and permit

requirements

Fowl (chicken, ducks, roosters)

Animals. 8.04.550. Miscellaneous animals—Monkeys, horses, chickens and ducks

Zones. 19.10.020. Land use and permit requirements

Fruit/Vegetable (horticulture)

Zones. 19.10.020. Land use and permit requirements

Zones. 19.20.020. Open space zone land uses and permit requirements

Goat (animal keeping)

Zones. 19.10.020. Land use and permit requirements

Zones. 19.20.020. Open space zone land uses and permit requirements

Heavy Livestock (animal keeping)

Zones. 19.10.020. Land use and permit requirements

Zones. 19.20.020. Open space zone land uses and permit requirements

Horse (horse keeping)

Animals. 8.04.550. Miscellaneous animals—Monkeys, horses, chickens and ducks

Zones. 19.10.020. Land use and permit requirements

Zones. 19.20.020. Open space zone land uses and permit requirements

Horticulture (horticulture)

Zones. 19.10.020. Land use and permit requirements

Zones. 19.20.020. Open space zone land uses and permit requirements

Nursery (nurseries)

Zones. 19.12.020. Land use and permit requirements

Zones. 19.18.020. Land use and permit requirements

Zones. 19.20.020. Open space zone land uses and permit requirements

Pig (pot bellied pigs)

Animals. 8.04.550. Miscellaneous animals—Monkeys, horses, chickens and ducks

Animals. 8.04.490. Limitation on number of dogs and cats kept; limitation on number of pot bellied pigs kept

Zones. 19.10.020. Land use and permit requirements

EL MONTE

Agricultural Waste (green waste, earthworms)

Health and Safety. 8.20.140. Disposition of green waste

Zoning. 17.34.010. Uses permitted

Bees (bees)

Zoning. 17.34.010. Uses permitted

Fish

Zoning. 17.34.010. Uses permitted

Fowl (fowl, poultry)

Zoning. 17.34.010. Uses permitted

Zoning. 17.34.020. Regulations

Fruit/Vegetable (flower gardens, vegetable gardens)

Zoning. 17.32.010. Uses permitted

Garden (flower gardens, vegetable gardens)

Zoning. 17.32.010. Uses permitted

Goat

Health and Safety. 8.48.030. Other animals—keeping of

Zoning. 17.36.010. Uses permitted

Heavy Livestock (cow, sheep)

Health and Safety. 8.48.030. Other animals—keeping of

Zoning. 17.36.010. Uses permitted

Horse (horses)

Health and Safety. 8.48.030. Other animals—keeping of

Zoning. 17.34.010. Uses permitted

Zoning. 17.36.010. Uses permitted

Horticulture (flower gardens, horticultural collections)

Zoning. 17.32.010. Uses permitted

Nursery

Zoning. 17.54.010. Uses permitted

Rabbit (rabbits)

Zoning. 17.34.010. Uses permitted

EL SEGUNDO

Bees (bees)

Nuisances and offenses. 7-1-4: Nuisances; Designated

Fish

Animal Control. 6-2-3: Animals permitted

Fowl (poultry, hen chickens)

Animal Control. 6-2-3: Animals permitted

Nuisances and offenses. 7-1-4: Nuisances; Designated

Garden (roof gardens)

Building Regulations. 13-10-3: Appendix M

Heavy Livestock (livestock)

Nuisances and offenses. 7-1-4: Nuisances; Designated

Rabbit (rabbits)

Animal Control. 6-2-3: Animals permitted

GARDENA

Fowl (fowl, rooster)

Animals. 6.16.010. Noisy Animals and fowl

Zoning. 18.42.020. Keeping of animals

Goat

Zoning. 18.42.020. Keeping of animals

Heavy Livestock

Zoning. 18.42.020. Keeping of animals

Horse

Zoning. 18.42.020. Keeping of animals

Nursery

Zoning. 18.46.030. Uses permitted subject to a conditional use permit

Pig

Zoning. 18.42.020. Keeping of animals

Rabbit

Zoning. 18.42.020. Keeping of animals

GLENDALE

Bees (bees, apiaries)

Animals. 8.76.010. Insect control measures

Zoning. Table 30.15-A. Special purpose districts and permit requirements

Fowl (chicken turkey, goose, fowl, pheasant)

Animals. 6.04.040. Flyproof pens

Animals. 6.04.050. Number of fowl or rabbits permitted

Health and Safety. 8.36.070 Animals

Horse

Zoning. 13.21 Horse Overlay Zone

Rabbit

Animals. 6.04.040. Flyproof pens

Animals. 6.04.050. Number of fowl or rabbits permitted

GLENDORA

Agricultural Waste (green waste)

Health and Sanitation, 6.08.270 Prohibited unauthorized disposal.

Health and Sanitation, 6.08.120 Containers—Responsibility of service recipients and self-haulers for use of.

Health and Sanitation, 6.08.170 Residential self-haulers, commercial self-haulers and gardeners—Disposal at authorized sites—Reporting requirements—Permits for self-haulers.

Health and Sanitation, 6.08.290 Prohibited solid waste spills and releases.

Health and Sanitation, 6.08.200 Cleanup responsibility.

Health and Sanitation, 6.08.050 Collection categories.

Health and Sanitation, 6.08.060 Solid waste fees, franchises, permits and licenses.

Health and Sanitation, 6.08.130 Containers—Placement and removal—Compost bin placement.

Health and Sanitation, 6.08.260 Prohibited public nuisance.

Health and Sanitation, 6.08.080 Commercial solid waste collection franchise agreements, permits and licenses—Minimum standards.

Health and Sanitation, 6.08.070 Residential solid waste collection, franchise agreements, permits and licenses—Minimum standards.

Bees (bees, apiaries)

Animals and Fowl, 8.04.090 Apiaries.

Public Peace, Morals, and Safety, 9.36.010 Maintenance of premises—Nuisances.

Fish (fish)

Animals and Fowl, 8.16.020 Feeding animals permitted when.

Fowl (fowl, poultry, roosters)

Animals and Fowl, 8.04.010 Animals prohibited—Exception.

Animals and Fowl, 8.04.020 Household pets specified.

Animals and Fowl, 8.04.100 Conditional use permit—Standards.

Public Peace, Morals, and Safety, 9.24.010 Unsanitary condition of private property.

Public Peace, Morals, and Safety, 9.44.090 Animals and fowl.

Buildings and Construction, 19.20.240 Animals at large.

Garden (garden)

Water, 14.24.180 Curtailment of use during water shortage.

Zoning, 21.10.330 Allowable land uses and permit requirements.

Zoning, 21.10.230 Area-wide guidelines.

Horse (horse, horses)

Animals and Fowl, 8.04.030 Keeping horses prohibited—Exception.

Animals and Fowl, 8.04.040 Land and stable requirements.

Animals and Fowl, 8.04.050 Location of stables.

Animals and Fowl, 8.04.060 Location of corrals and pasture.

Animals and Fowl, 8.04.080 Construction—Submitting plot plan.

Animals and Fowl, 8.04.070 Setback of structure.

Animals and Fowl, 8.04.105 Variances.

Nursery (nursery, nurseries)

Water, 14.34.065 Stage one drought condition.

Zoning, 21.13 Monrovia Nursery Specific Plan.

Zoning, 21.08.030 Land use plan.

Zoning, 21.10.330 Allowable land uses and permit requirements.

Zoning, 21.08.030 Land use plan.

Zoning, 21.A.C Table C—Permitted and conditionally permitted uses.

Pig (pigs)

Animals and Fowl, 8.04.020 Household pets specified.

Rabbit

Animals and Fowl, 8.04.020 Household pets specified.

HAWAIIAN GARDENS

Fowl (fowl, chickens, roosters)

Animals, 7.08.010 Keeping of animals prohibited generally.

Animals, 7.08.050 Nonconforming uses.

Animals, 12.20.010 Animals at large.

Zoning, 18.90.040 Animal Keeping and Household Pets.

Livestock (cattle, dairies)

Animals, 7.08.030 Existing dairies.

Horticulture (horticulture)

Zoning, 18.60.050 Uses Permitted in Non-Residential Zones.

Nursery (nursery)

Zoning, 18.60.050 Uses Permitted in Non-Residential Zones.

Zoning, 18.70.060 Outdoor Storage, Display and Uses.

HAWTHORNE

Bees (bees)

Animals, 6.24.060 Keeping of bees.

Fowl (fowl, chicken, rooster)

Animals, 6.24.050 Keeping of crowing roosters, domestic fowl and rabbits on residential property.

Animals, 6.24.070 Cleanliness of premises where animals are kept.

Animals, 9.34.010 Noisy animals.

Animals, 6.24.030 Keeping of certain animals closer than thirty-five feet to any habitable dwelling.

Garden (garden)

Streets and Sidewalks, 12.30.010 Discharge of debris on streets or sidewalks.

Health and Safety, 8.16.070 Who may collect garbage and waste matter.

Zoning, 17.24.030 Conditional uses.

Zoning, 17.24.020 Permitted uses

Horticulture (horticultural)

Zoning, Chapter 17.13 H—Horticultural Classification

Livestock (cow)

Animals, 6.24.100 Health officer may order premises and manure bins cleaned and disinfected.

Animals, 6.24.090 Manure bins and removal of manure.

Horse (horse)

Animals, 6.12.080 Necessity for horse registration—Exception.

Animals, 6.12.090 Horse registration to be posted.

Animals, 6.12.120 Contents of registration.

Animals, 6.24.100 Health officer may order premises and manure bins cleaned and disinfected.

Animals, 6.24.090 Manure bins and removal of manure.

Nursery (nursery, nurseries)

Animals, 6.24.090 Manure bins and removal of manure.

Zoning, 17.24.020 Permitted uses.

Zoning, 17.32.030 Limitations on permitted uses.

Zoning, 17.58.030 Required parking.

Rabbit (rabbits)

Animals, 6.24.050 Keeping of crowing roosters, domestic fowl and rabbits on residential property.

HERMOSA BEACH

Fowl (fowl, chicken)

Animals, 6.04.060 Permit.

Bees (bees)

Nuisances, 8.28.020 Enumeration of nuisances.

Horticulture (horticulture)

Stormwater and Urban Runoff Pollution Control, 8.44.095 Standard Urban Storm Water Mitigation Plan ("SUSMP") Requirements for New Development and Redevelopment Projects.

Nursery (nursery)

Zoning, 17.26.030 C-1, C-2 and C-3 land use regulations.

Stormwater and Urban Runoff Pollution Control, 8.44.100 Inspection authority.

HIDDEN HILLS

Agricultural Waste (green waste)

Public Health and Sanitation, 3.4.7 Exclusions

Fowl (fowl)

Animal Control, 3.6.1 Adoption of [Los Angeles] County Provisions

Zoning, 5.2C.1 Residential Agriculture Suburban Zone

Zoning, 5.2D.1 Residential Agriculture Suburban Zone 2

Zoning, 5.2E.1

Fruit/Vegetable (fruit, vegetable)

Zoning, 5.2C.1 Residential Agriculture Suburban Zone

Zoning, 5.2D.1 Residential Agriculture Suburban Zone 2

Zoning, 5.2E.1

Garden (garden)

Zoning, 5.2C.1 Residential Agriculture Suburban Zone

Zoning, 5.2D.1 Residential Agriculture Suburban Zone 2

Zoning, 5.2E.1

Horticulture (horticulture, flower)

Zoning, 5.2C.1 Residential Agriculture Suburban Zone

Zoning, 5.2D.1 Residential Agriculture Suburban Zone 2

Zoning, 5.2E.1

Nursery (nursery, nurseries)

Zoning, 5.2C.1 Residential Agriculture Suburban Zone

Zoning, 5.2D.1 Residential Agriculture Suburban Zone 2

Zoning, 5.2E.1

HUNTINGTON PARK

Agricultural Waste (vegetable waste)

Sanitation and Health, 6.4.03 Deposits.

Bees (bee, bees)

Sanitation and Health, 6.1.503 Vector control measures.

Fish (fish)

Public Welfare, Morals, and Conduct, 5.11.11 Offensive industries.

Fowl (fowl, chicken, poultry)

Animals and Fowl, 6.1.101 Continuance of existing ordinances.

Sanitation and Health, 6.4.11 Slaughterhouses and packing establishments: Grease traps and interceptors.

Public Welfare, Morals, and Conduct, 5-11.13 Animal yards and manure.

Public Welfare, Morals, and Conduct, 5-11.14 Feeding garbage.

Fruit/Vegetable (fruit, vegetable)

Sanitation and Health, 6-4.03 Deposits.

Zoning, 9-4.302 Allowed uses.

Public Welfare, Morals, and Conduct, 5-11.14 Feeding garbage.

Public Welfare, Morals, and Conduct, 5-11.06 Littering.

Public Welfare, Morals, and Conduct, 5-11.08 Discharge and accumulation of filth and refuse.

Sanitation and Health, 6-4.03 Deposits.

Garden (garden)

Zoning, 9-3.804 Number of parking spaces required.

Zoning, 9-4.202 Allowed uses.

Heavy Livestock (livestock, cow)

Public Welfare, Morals, and Conduct, 5-11.13 Animal yards and manure.

Public Welfare, Morals, and Conduct, 5-11.15 Butchering.

Public Welfare, Morals, and Conduct, 5-11.11 Offensive industries.

Zoning, 9-4.302 Allowed uses.

Horse (horse)

Public Welfare, Morals, and Conduct, 5-11.15 Butchering.

Public Welfare, Morals, and Conduct, 5-13.02 Permit—Required.

Nursery (nursery, nurseries)

Zoning, 9-3.804 Number of parking spaces required.

Sanitation and Health, 6-5.405 Phase III shortage.

Sanitation and Health, 6-5.406 Phase IV shortage.

Sanitation and Health, 6-5.404 Phase II shortage.

Zoning, 9-4.302 Allowed uses.

Zoning, 9-4.202 Allowed uses.

Rabbit (rabbits)

Public Welfare, Morals, and Conduct, 5-11.15 Butchering.

Public Welfare, Morals, and Conduct, 5-11.13 Animal yards and manure.

INDUSTRY

Agricultural Waste (green waste)

Health and Safety, 8.20.020 Policy.

Health and Safety, 8.20.070 Collection of solid waste restricted to collector.

Bees (apiaries)

Zoning, 17.16.010 Permitted uses.

General Provisions, 1.30.040 Public nuisances designated.

Farm (farm)

Zoning, 17.16.010 Permitted uses.

Fowl (poultry)

Zoning, 17.16.010 Permitted uses.

Garden (gardens)

Zoning, 17.24.030 Uses permitted.

Zoning, 17.16.010 Permitted uses.

Goat (goats)

Zoning, 17.16.010 Permitted uses.

Heavy Livestock (cattle, cow, sheep, dairy)

Zoning, 17.16.010 Permitted uses.

Zoning, 17.16.030 General regulations—Zone M-A.

General Provisions, 1.30.040 Public nuisances designated.

Horse (horses)

Zoning, 17.16.010 Permitted uses.

Nursery (nurseries)

Zoning, 17.16.025 Uses permitted with conditional use permit.

Zoning, 17.16.010 Permitted uses.

Pig (hogs)

Zoning, 17.16.010 Permitted uses.

Rabbit (rabbits)

Zoning, 17.16.010 Permitted uses.

INGLEWOOD

Bee (bees, animal)

Animal Regulations, Section 4-2. Permit to Keep Required.

Section 4-1. Definition of Animal.

Fish (fish, animal)

Animal Regulations, Section 4-2. Permit to Keep Required.

Animal Regulations, Section 4-3. Exceptions to Permit Requirement.

Planning and Zoning, Section 12-33. M-2 Zone. Permitted Uses.

Fowl (fowl poultry, animal, chickens, turkeys)

Animal Regulations, Section 4-1. Definition of Animal.

Animal Regulations, Section 4-16. Special Districts Regulation.

Animal Regulations, Section 5-48. Animals and Fowl, Noise Regulated.

Planning and Zoning, Section 12-17.1. Home Occupation. Prohibitions.

Fruit/Vegetable (vegetable)

Planning and Zoning, Section 12-18.11. R-1Z Zone. Permitted Uses.

Planning and Zoning, Section 12-18. R-1 Zone. Permitted Uses.

Garden (gardens)

Planning and Zoning, Section 12-18.11. R-1Z Zone. Permitted Uses.

Planning and Zoning, Section 12-18. R-1 Zone. Permitted Uses.

Planning and Zoning, Section 12-20. R-2 Zone. Permitted Uses.

Planning and Zoning, Section 12-22. R-4 Zone. Permitted Uses.

Planning and Zoning, Section 12-21. R-3 Zone. Permitted Uses.

Goat (goats, animal)

Animal Regulations, Section 4-1. Definition of Animal.

Animal Regulations, Section 4-16. Special Districts Regulation.

Heavy Livestock (livestock)

Fire Prevention, Section 6-75. Liability for Unauthorized Disposal or Release.

Planning and Zoning, Section 12-17.1. Home Occupation. Prohibitions.

Horticulture (ornamental, flowers)

Planning and Zoning, Section 12-17.4. Home Occupation. Application Procedure.

Nursery (nursery, nurseries)

Planning and Zoning, Section 12-24. C-2 Zone. Permitted Uses.

Planning and Zoning, Section 12-44. Commercial Parking Requirements.

Planning and Zoning, Section 12-25. C-3 Zone. Permitted Uses.

Pig (animal)

Animal Regulations, Section 4-1. Definition of Animal.

Rabbit (rabbits, animal)

Animal Regulations, Section 4-1. Definition of Animal.

Animal Regulations, Section 4-16. Special Districts Regulation.

IRWINDALE

Agricultural Waste (garden)

Business Taxes, Licenses, and Regulations, 5.12.100 - Required for certain businesses, professions, trades and occupations—Additional governing rules and regulations.

Fish (fish)

Zoning, 17.52.080 - Uses requiring a conditional use permit.

Fowl (fowl, poultry)

Public Peace, Morals, and Welfare, 9.28.090 - Animals and fowl.

Zoning, 17.28.010 - Permitted uses.

Zoning, 17.52.080 - Uses requiring a conditional use permit.

Fruit/Vegetable (fruit, vegetable, crops)

Zoning, 17.52.010 - Permitted uses.

Zoning, 17.28.010 - Permitted uses.

Garden (garden)

Public Peace, Morals, and Welfare, 9.28.100 - Machinery, equipment, fans, and air conditioning.

Heavy Livestock (bovine)

Zoning, 17.28.010 - Permitted uses.

Horse (horses)

Zoning, 17.28.010 - Permitted uses.

Horticulture (horticulture)

Zoning, 17.28.010 - Permitted uses.

Pig (hog)

Business Taxes, Licenses, and Regulations, 5.16.100 - Required for certain businesses, professions, trades and occupations—Special hearing on issuance—Additional governing rules and regulations.

Business Taxes, Licenses, and Regulations, 5.08.270 - Hog ranch.

Rabbit (rabbits)

Zoning, 17.28.010 - Permitted uses.

LA CAÑADA FLINTRIDGE

Agricultural Waste (green waste)

Sanitation and Health, 9.12.080 Disposal of collected materials.

Sanitation and Health, 9.12.055 Mandatory green waste collection and recycling program.

Fowl (fowl, chickens, geese)

Zoning, 11.32.060 Livestock and farm fowl permitted as an accessory use.

Zoning, 11.32.030 Hogs and roosters prohibited.

Zoning, 11.32.170 Abatement of excess animals.

Zoning, 11.32.070 Maintenance of premises.

Zoning, 11.32.050 Dogs, cats and chickens.

Goat (goat)

Zoning, 11.32.060 Livestock and farm fowl permitted as an accessory use.

Zoning, 11.32.100 Excess animal permit.

Zoning, 11.32.070 Maintenance of premises.

Heavy Livestock (cows, sheep)

Zoning, 11.32.060 Livestock and farm fowl permitted as an accessory use.

Zoning, 11.32.080 Boarding of livestock.

Zoning, 11.32.170 Abatement of excess animals.

Zoning, 11.32.100 Excess animal permit.

Zoning, 11.32.070 Maintenance of premises.

Horse (horse, horses)

Zoning, 11.32.060 Livestock and farm fowl permitted as an accessory use.

Zoning, 11.32.010 Purpose.

Zoning, 11.32.170 Abatement of excess animals.

Zoning, 11.32.080 Boarding of livestock.

Zoning, 11.32.100 Excess animal permit.

Zoning, 11.32.070 Maintenance of premises.

Nursery (nurseries)

Zoning, 11.14.020 Uses permitted, conditionally permitted and prohibited.

Pig (hogs)

Zoning, 11.32.030 Hogs and roosters prohibited.

Rabbit (rabbits)

Zoning, 11.32.040 Animals in residential zones.

LA HABRA HEIGHTS

Agricultural Waste (green waste)

Safety and Environmental Quality, 4.3.20 Requirements and Regulations Governing Solid Waste

Bees (apiary)

Safety and Environmental Quality, 4.10.80 Apiaries

Fowl (fowl, poultry)

Safety and Environmental Quality, 4.15.20 Pest Control

Safety and Environmental Quality, 4.16.70 Local Regulations Governing Illicit Discharges

Fruit/Vegetable (vegetables)

Safety and Environmental Quality, 4.15.20 Public Nuisances

Goat (goats)

Development Code and Zoning Ordinance, 7.10.40 Development Standards for Animal Keeping Development

Heavy Livestock (livestock, cow, sheep)

Development Code and Zoning Ordinance, 7.10.40 Development Standards for Animal Keeping Development

Safety and Environmental Quality, 4.10.40 Animal Noise

Horse (horses, equine)

Development Code and Zoning Ordinance, 7.10.40 Development Standards for Animal Keeping Development

Nursery (nurseries)

Development Code and Zoning Ordinance, 7.3.20 R-A Zone

Pig (pig, hog, swine)

Development Code and Zoning Ordinance, 7.10.40 Development Standards for Animal Keeping Development

LA MIRADA

Agricultural waste (green waste)

Health and Sanitation, 6.08.220 Residential household exclusion

Health and Sanitation, 6.08.230 Gardener's exclusion

Health and Sanitation, 6.08.520 Residential collection—Placement and removal of containers.

Health and Sanitation, 6.08.580 Commercial/Industrial—Maintenance and placement of containers.

Bees (bees)

Health and Sanitation, 6.14.010 Keeping of bees prohibited

Fish (fish)

Zoning, 21.80.030 Exemptions from permit requirements

Farm (farm)

Zoning, 21.30 Farm animal overlay zoning district

Fowl (chickens, fowl)

Public Peace, Morals, and Safety, 9.20.010 Prohibited acts

Public Peace, Morals, and Safety, 9.20.020 Exemptions

Zoning, 21.30.020 Permitted land uses

Zoning, 21.22.020 Permitted and prohibited land uses

Zoning, 21.18.030 Development standards

Goat (livestock)

Zoning, 21.30.020 Permitted land uses

Zoning, 21.22.020 Permitted and prohibited land uses

Zoning, 21.18.030 Development standards

Heavy Livestock (livestock, dairy, cow)

Zoning, 21.30.020 Permitted land uses

Zoning, 21.22.020 Permitted and prohibited land uses

Zoning, 21.18.030 Development standards

Health and Sanitation, 6.12 Dairy and cow herds

Horse (horses)

Zoning, 21.30.030 Performance standards

Zoning, 21.20.020 Permitted land uses

Horticulture (horticulture)

Water and Sewage, 13.12.075 Standard Urban Stormwater Mitigation Plan (SUSMP) requirements

Nursery (nursery)

Zoning, 21.20.020 Permitted land uses

LA PUENTE

Agricultural Waste (green waste)

Health and Sanitation, 4.12.210 Residential householder exclusion

Health and Sanitation, 4.12.220 Gardener's exclusion

Fish (fish)

Building Regulations, 8.16.010 Fences required around swimming pools—Dimensions

Public Safety and Morals, 3.36.020 Animal control ordinance amended

Fowl (fowl, rooster, poultry)

Zoning, 10.68.030 Noisy animals prohibited

Zoning, 10.68.050 Keeping of poultry, rabbits and small animals restricted

Goat (goats)

Zoning, 10.68.020 Animals prohibited from residential and commercial zones

Zoning, 10.56.010 Permitted uses—Conditions

Heavy Livestock (oxen, cattle, sheep)

Zoning, 10.68.010 Animals prohibited from city

Zoning, 10.56.010 Permitted uses—Conditions

Horse (horses)

Zoning, 10.68.060 Keeping of horses restricted

Horticulture (flowers, horticultural)

Zoning, 10.16.010 Permitted uses

Zoning, 10.40.010 Permitted uses

Nursery (nurseries)

Zoning, 10.48.020 Permitted uses

Zoning, 10.40.110 Permitted uses

Pig (swine)

Zoning, 10.68.010 Animals prohibited from city

Rabbit (rabbits)

Zoning, 10.68.050 Keeping of poultry, rabbits and small animals restricted

LA VERNE

Bees (apiaries)

Animals, 6.16.030 Apiaries

Farm (farms)

Zoning, 18.32.020 Permitted uses.

Fish (fish)

Buildings and Construction, 15.28.070 Swimming pools—Compliance

Animals, 6.16.020 Household pets

Fowl (poultry, chickens, geese)

Animals, 6.16.010 General prohibition

Animals, 6.16.020 Household pets

6.16.040 Conditional use permit

Business Taxes, Licenses, and Regulations, 5.08.170 Exemptions—Farmers

Fruit/Vegetable (crops, berry)

Zoning, 18.32.020 Permitted uses

Zoning, 18.68.050 Perimeter protection

Horse (horses)

Zoning, 18.32.030 Conditional uses

Horticulture (horticulture, flower)

Zoning, 18.32.020 Permitted uses

Public Services, 13.50.093 Standard urban stormwater mitigation plan (SUSMP)

Nursery (nurseries)

Public Services, 13.15.040 Water use restrictions established

Zoning, 18.32.030 Conditional uses

Zoning, 18.44.030 Conditional uses

Rabbit (rabbits)

Animals, 6.16.020 Household pets

LAKEWOOD

Bees (bees, apiaries)

Miscellaneous, 4292 Bees

Ordinances, 83-14 Prohibiting the operation of bees, hives, combs, and related appliances on residential property

Zoning, 9338 Uses permitted

Fish (fish)

Ordinances, 4190 - Bird Fowl Reptile Rabbit

Zoning, 9326 Uses permitted

Zoning, 9338 Uses permitted

Zoning, 9440 Uses permitted

Fowl (fowl, chicken)

Ordinances, 4276 Fowl and rabbit

Ordinances, 4190 - Bird Fowl Reptile Rabbit

Zoning, 9326 Uses permitted

Zoning, 9338 Uses permitted

Zoning, 9440 Uses permitted

Fruit/Vegetable (vegetable, crops, berry)

Zoning, 9320 Uses permitted

Zoning, 9326 Uses permitted

Zoning, 9338 Uses permitted

Zoning, 9440 Uses permitted

Goat (goat)

Ordinances, 92-9, 913 Slaughter of animals

Zoning, 9338 Uses permitted

Heavy livestock (livestock, cattle, cows, dairies)

Zoning, 9320 Uses permitted

Zoning, 9326 Uses permitted

Zoning, 9338 Uses permitted

Zoning, 9443 Uses authorized by a conditional use permit

Horses(horse, horses)

Zoning, 9320 Uses permitted

Zoning, 9326 Uses permitted

Zoning, 9440 Uses permitted

Horticulture (flower)

Zoning, 9320 Uses permitted

Zoning, 9326 Uses permitted

Zoning, 9338 Uses permitted

Zoning, 9440 Uses permitted

Nursery (nursery)

Zoning, 9320 Uses permitted

Zoning, 9326 Uses permitted

Zoning, 9338 Uses permitted

Zoning, 9440 Uses permitted

Pig (pig, hog)

Zoning, 9338 Uses permitted

Rabbit (rabbit)

Zoning, 9320 Uses permitted

Zoning, 9326 Uses permitted

Zoning, 9338 Uses permitted

Zoning, 9440 Uses permitted

Zoning, 9360 Uses permitted

LANCASTER

Bees (bees)

Zoning, 17.08.040 - Permitted uses

Zoning 17.08.310 - Animal regulations

Fish (fish)

Health and Safety, 8.04.200 - Swimming pool must be protected.

Zoning, 17.08.040 - Permitted uses

Zoning 17.08.310 - Animal regulations

Fowl (fowl, poultry)

Zoning, 17.08.040 - Permitted uses

Zoning, 17.08.310 - Animal regulations

Fruit/Vegetable (crops, berries)

Zoning, 17.08.040 - Permitted uses

Zoning, 17.20.220 - Uses subject to permits

Zoning, 17.16.060 - Uses subject to director's review and approval

Zoning, 17.12.070 - Uses subject to director's review and approval

Goat (goats)

Zoning, 17.08.040 - Permitted uses

Zoning 17.08.310 - Animal regulations

Heavy Livestock (livestock, cattle, sheep)

Zoning, 17.08.040 - Permitted uses

Zoning 17.08.310 - Animal regulations

Zoning, 17.16.070 - Uses subject to conditional use permits

Horse (horse, equine)

Zoning, 17.08.040 - Permitted uses

Zoning 17.08.310 - Animal regulations

Horticulture (horticultural)

Zoning, 17.08.060 - Uses subject to director's review and approval

Zoning, 17.12.070 - Uses subject to director's review and approval

Nursery (nurseries)

Zoning, 17.08.040 - Permitted uses

Pig (pigs, hogs)

Zoning, 17.08.040 - Permitted uses

Zoning 17.08.310 - Animal regulations

Zoning, 17.16.070 - Uses subject to conditional use permits

Rabbit (rabbits)

Zoning, 17.08.040 - Permitted uses

Zoning 17.08.310 - Animal regulations

LAWNDALE

Agricultural Waste (green waste)

Health and Safety, 8.28.110 License, permit, franchise requirements

Health and Safety, 8.28.030 Exceptions to collection arrangements

Bees (apiaries)

Animals, 6.12.040 Apiaries

Fowl (poultry)

Zoning, 17.64.150 IPD industrial planned development—Uses permitted

Zoning, 17.64.020 M-1 light manufacturing zone—Uses permitted conditionally

Zoning, 17.56.090 C-3 and C-4 unlimited commercial zones—Additional uses permitted

Horticulture (flowers)

Zoning, 17.56.020 C-1 restricted business zone—Uses permitted

Nursery (nurseries)

Zoning, 17.56.020 C-1 restricted business zone—Uses permitted

Pig (pigs, hogs)

Zoning, 17.48.110 Uses permitted—R-2 zone

Zoning, 17.48.060 Uses permitted—R-1 zone

Rabbit (rabbits)

Zoning, 17.64.150 IPD industrial planned development—Uses permitted

Zoning, 17.64.020 M-1 light manufacturing zone—Uses permitted conditionally

LOMITA

Agricultural Waste (green waste)

Sanitation and Health, 5.3.20. - Fees, franchises permits and licenses

Sanitation and Health, 5.3.60. - Self-haulers and gardeners

Bees (bees)

Public Safety, 3.16.03. - Public nuisances—Designated

Fish (fish)

Public Safety, 3.8.03. - Protective devices required

Public Safety, 3.12.11. - Swimming pool must be protected

Fowl (poultry, farm pets)

Public Safety, 3.16.03. - Public nuisances—Designated

Planning and Zoning, 11.1.30.01. - Uses

Planning and Zoning, 11.1.30.08. - Pets—Household and farm

Fruit/Vegetable (vegetables, crops, berry)

Planning and Zoning, 11.1.26.04. - Uses subject to commission's review and approval

Planning and Zoning, 11.1.51.02. - Principal uses permitted

Goat (goats)

Planning and Zoning, 11.1.30.01. - Uses

Planning and Zoning, 11.1.30.08. - Pets—Household and farm

Heavy Livestock (livestock)

Public Safety, 3.16.03. - Public nuisances—Designated

Planning and Zoning, 11.1.30.01. - Uses

Planning and Zoning, 11.1.30.08. - Pets—Household and farm

Horse (horse)

Planning and Zoning, 11.1.30.08. - Pets—Household and farm

Horticulture (flowers)

Planning and Zoning, 11.1.26.04. - Uses subject to commission's review and approval

Nursery (nurseries)

Planning and Zoning, 11.1.45.02. - Principal uses permitted

Planning and Zoning, 11.1.26.04. - Uses subject to commission's review and approval

Planning and Zoning, 11.1.51.02. - Principal uses permitted

Rabbit (rabbits)

Planning and Zoning, 11-1.30.08. - Pets—Household and farm

LONG BEACH

Agricultural Waste (green waste)

Health and Safety, 8.60.040 - Green waste

Bees (bees)

Animals, 6.24.010 - Beehives

Fish (fish)

Health and Safety, 8.24.020 - Permit—Required

Farm (farm)

Health and Safety, 8.48.020 - Areas prohibited

Zoning, 21.36.210 - Development standards

Fowl (fowl)

Animals, 6.20.020 - Fowl—Number restricted

Animals, 6.20.030 - Fowl—Distance from dwelling
Animals, 6.20.050 - Crowing fowl prohibited
Animals, 6.20.070 - Fowl—Enclosure sanitation
Animals, 6.20.120 - Fowl and rabbits—Artificial coloring prohibited
Health and Safety, 8.28.040 - Slaughterhouse location

Fruit/Vegetable (crops)

Zoning, 21.33.080 - Meaning of the Y/AP and Y/C designations

Garden (garden)

Zoning, 21.42.035 - Special requirements for Water Efficient Landscaping
Zoning, 21.52.260 - Interim playgrounds, community gardens and recreational parks

Goat (goats)

Animals, 6.20.130 - Goats—Location
Animals, 6.20.140 - Goats—Number
Animals, 6.20.150 - Goats—Distance from dwelling
Animals, 6.20.160 - Rabbits or goats—Enclosure sanitation
Health and Safety, 8.36.110 - Acceptance of other inspection services

Heavy Livestock (livestock, cattle, dairy)

Zoning, 21.33.080 - Meaning of the Y/AP and Y/C designations
Health and Safety, 8.36.110 - Acceptance of other inspection services
Health and Safety, 8.28.070 - Refrigeration plant—Uninspected meat—Deposit statement contents
Health and Safety, 8.48.020 - Areas prohibited

Horse (horses)

Zoning, 21.38.010 - Purpose
Zoning, 21.38.110 - Permitted uses
Zoning, 21.38.201 - Number of horses permitted
Zoning, 21.38.205 - Stalls required
Zoning, 21.51.210 - Animals (household pets)

Nursery (nurseries)

Zoning, 21.34.201 - General provisions
Zoning, 21.34.201 - General provisions

Pig (hog, swine)

Zoning, 8.48.020 - Areas prohibited
Health and Safety, 8.28.070 - Refrigeration plant—Uninspected meat—Deposit statement contents

Rabbit (rabbits)

Animals, 6.20.120 - Fowl and rabbits—Artificial coloring prohibited
Animals, 6.20.160 - Rabbits or goats—Enclosure sanitation
Animals, 6.16.210 - Enforcement

LOS ANGELES

Agricultural Waste (green waste, mulch)

General Provisions and Zoning, 11.5.7 Specific Plan Procedures, U-9
General Provisions and Zoning, 12.19. M2 Light industrial zone, A-15

Bees (bee, apiary, apiaries)

General Provisions and Zoning, 12.05 A1 Agriculture zone, A-6
General Provisions and Zoning, 12.06 A2 Agricultural zone, A-2-F
General Provisions and Zoning, 12.17.5. MR1 Restricted industrial zone, B-3-A

Fish (fish)

General Provisions and Zoning, 12.05 A1 Agriculture zone, A-7
General Provisions and Zoning, 12.06 A2 Agricultural zone, A-2-G
General Provisions and Zoning, 12.20 M3 Heavy industrial zone, A-13

Farm (farm, farming)

General Provisions and Zoning, 12.04.09. PF Public facilities zone, B1
General Provisions and Zoning, 12.05 A1 Agriculture zone, A-6
General Provisions and Zoning, 12.06 A2 Agricultural zone, A-2-F
General Provisions and Zoning, 12.17.5 MR1 Restricted industrial zone, B-3-A

Fowl (fowl, poultry)

General Provisions and Zoning, 12.05 A1 Agriculture zone, A-6

General Provisions and Zoning, 12.06 A2 Agricultural zone, A-2-G
General Provisions and Zoning, 12.07. RA. Suburban Zone, A-2
General Provisions and Zoning, 12.07.01 RE Residential estate zone, A-3
General Provisions and Zoning, 12.07.1 RS. Suburban Zone, A-3
General Provisions and Zoning, 12.08 R1. One-family zone, A-3
Public Safety and Protection, 53.71 Roosters - Limit

Garden (garden, gardening)

General Provisions and Zoning, 12.05 A1 Agriculture zone, A-16-E
General Provisions and Zoning, 12.07 RA. Suburban zone, A-6
General Provisions and Zoning, 12.07.01 RE Residential estate zone, A-3
General Provisions and Zoning, 12.07.1 RS. Suburban zone, A-3
General Provisions and Zoning, 12.08 R1. One-family zone, A-3
General Provisions and Zoning, 12.09.3 MP Mobilehome park zone, B-4

Goat (goat)

General Provisions and Zoning, 12.05 A1 Agriculture zone, A-7
General Provisions and Zoning, 12.07 RA. Suburban zone, A-7
General Provisions and Zoning, 12.16 C4 Commercial zone, W-6
Public safety and protection, 53.47 Breeding animals - enclosures

Heavy Livestock (livestock, cattle)

General Provisions and Zoning, 12.05 A1 Agriculture zone, A-7
General Provisions and Zoning, 12.07 RA. Suburban zone, A-7
General Provisions and Zoning, 12.16 C4 Commercial zone, W-5
General Provisions and Zoning, 12.16 C4 Commercial zone, W-6

Horse (equine)

General Provisions and Zoning, 12.05 A1 Agriculture zone, A-7
General Provisions and Zoning, 12.07 RA. Suburban zone, A-7
General Provisions and Zoning, 12.07 RA. Suburban zone, A-11-B
General Provisions and Zoning, 12.16 C4 Commercial zone, W-5
General Provisions and Zoning, 12.16 C4 Commercial zone, W-6
General Provisions and Zoning, 12.07 RA. Suburban zone, A-6
General Provisions and Zoning, 12.07.01 RE Residential estate zone, A-3
General Provisions and Zoning, 12.07.1 RS. Suburban zone, A-3
General Provisions and Zoning, 12.08 R1. One-family zone, A-3
Public welfare, 53.15.1 Equine license fee

Horticulture (flower)

General Provisions and Zoning, 12.16 C4 Commercial zone, A-22

Nursery (nursery)

General Provisions and Zoning, 12.16 C4 Commercial zone, A-22

Pig (swine)

General Provisions and Zoning, 12.05 A1 Agriculture zone, A-7
General Provisions and Zoning, 12.07 RA. Suburban zone, A-7
General Provisions and Zoning, 12.16 C4 Commercial zone, W-46
General Provisions and Zoning, 12.16 C4 Commercial zone, W-6
General Provisions and Zoning, 12.18 MR2 Restricted light industrial zone, B-2-U

Rabbit (rabbit)

General Provisions and Zoning, 12.05 A1 Agriculture zone, A-16-E
General Provisions and Zoning, 12.07 RA. Suburban zone, A-6
General Provisions and Zoning, 12.07.01 RE Residential estate zone, A-3
General Provisions and Zoning, 12.07.1 RS. Suburban zone, A-3
General Provisions and Zoning, 12.08 R1. One-family zone, A-3
General Provisions and Zoning, 12.09.3 MP Mobilehome park zone, B-4

LYNWOOD

Animals generally

8.1 County animal control ordinance adopted
Appendix A, Uses by zoning district

Bee (bee, bees, hive, apiary)

Ordinance table, Ord. 797 - Amending Sec. 4.7 of code to add “bees” to the animals which are forbidden within the city limits
Ordinance Table, Ord. 843 - Amending Ord. 570 prohibiting bee keeping and limiting the number of certain other animals and fowl

Animals, 10.76 Apiaries (Los Angeles County Code)

Fowl (fowl, poultry, egg)

Public Safety, 3.12.11 Animals And Fowl

Ordinance Table, Ord. 843 - Amending Ord. 570 prohibiting bee keeping and limiting the number of certain other animals and fowl

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Fruit/Vegetable (crop)

Public Safety, 3.13.2 Declaration of Public Nuisance

Goat (goat)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.020 Importation permit-Required when-Stockyard and animal-care standards (Los Angeles County Code)

Heavy Livestock (livestock, cattle, sheep)

Animals, 10.32.040-050 Animals running at large (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.60 Tuberculosis control (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Horse (horse, equine)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Pig (pig, hog, swine)

Animals, 10.28.061-062 Keeping and breeding pygmy pigs - License required (Los Angeles County Code)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.52 Stockyards and hog ranches (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Animals, 10.90.010 Licensing fees schedule (Los Angeles County Code)

Rabbit (rabbit)

Animals, 10.40 General requirements (Los Angeles County Code)

MALIBU

Agricultural Waste (green waste)

Health and Safety, 8.32.670 Residential householder exclusion

Bee (bees)

Zoning, 17.08.020 Permitted uses

Zoning, 17.18.030 Conditionally permitted uses

Fish (fish)

Zoning, 17.08.020 Permitted uses

Zoning, 17.18.030 Conditionally permitted uses

Fowl (poultry, fowl)

Zoning, 17.08.020 Permitted uses

Zoning, 17.18.030 Conditionally permitted uses

Fruit/Vegetable (crops, berry)

Zoning, 17.08.020 Permitted uses

Zoning, 17.10.020 Permitted uses

Goat (goats)

Zoning, 17.08.020 Permitted uses

Zoning, 17.10.020 Permitted uses

Zoning, 17.18.030 Conditionally permitted uses

Heavy Livestock (livestock, cattle, sheep)

Zoning, 17.08.020 Permitted uses

Zoning, 17.10.020 Permitted uses

Zoning, 17.18.030 Conditionally permitted uses

Horse (horse, equine)

Zoning, 17.08.020 Permitted uses

Zoning, 17.08.030 Uses subject to director's review.

Zoning, 17.10.020 Permitted uses

Zoning, 17.18.030 Conditionally permitted uses

Horticulture (horticultural)

Zoning, 17.12.040 Conditionally permitted uses

Public Services, 13.04.110 Standard Urban Storm Water Mitigation Plan ("SUSMP") requirements for new development and redevelopment projects

Nursery (nurseries)

Zoning, 17.08.020 Permitted uses

Zoning, 17.10.020 Permitted uses

Zoning, 17.22.020 Permitted uses

Pig (pigs, hogs)

Zoning, 17.08.020 Permitted uses

Zoning, 17.18.030 Conditionally permitted uses

Rabbit (rabbits)

Zoning, 17.08.020 Permitted uses

Zoning, 17.18.030 Conditionally permitted uses

MANHATTAN BEACH

Fish (domestic animals)

Zoning, 10.16.020 - CL, CC, CG, CD, CNE districts: land use regulations

Zoning, 10.12.020 - Land use regulations: RS, RM, RH, RPD, and RSC districts

Fowl (fowl, domestic animals)

Sanitation and Health, 5.48.050 - Animals and fowl

Zoning, 10.16.020 - CL, CC, CG, CD, CNE districts: land use regulations

Garden (gardens)

Zoning, 10.40.060 - Adoption procedures

Heavy Livestock (livestock, cattle)

Zoning, 10.16.020 - CL, CC, CG, CD, CNE districts: land use regulations

Zoning, 10.12.020 - Land use regulations: RS, RM, RH, RPD, and RSC districts

Horse (horses, heavy animal)

Zoning, 10.16.020 - CL, CC, CG, CD, CNE districts: land use regulations

Zoning, 10.12.020 - Land use regulations: RS, RM, RH, RPD, and RSC districts

Nursery (nurseries)

Zoning, 10.08.050 - Commercial use classifications

Zoning, 10.60.080 - Outdoor facilities

Zoning, 10.16.020 - CL, CC, CG, CD, CNE districts: land use regulations

Pig (pigs)

Zoning, 10.16.020 - CL, CC, CG, CD, CNE districts: land use regulations

Zoning, 10.12.020 - Land use regulations: RS, RM, RH, RPD, and RSC districts

Rabbit (rabbits)

Zoning, 10.16.020 - CL, CC, CG, CD, CNE districts: land use regulations

Zoning, 10.12.020 - Land use regulations: RS, RM, RH, RPD, and RSC districts

MAYWOOD

Bee (bees)

Public Welfare, Morals, and Conduct, 6.05 Keeping of bees

Nursery (nurseries)

Zoning, Permitted Uses Appendix

MONROVIA

Agricultural Waste (green waste)

Health and Safety, 8.14.030 Establishment and maintenance of defensible space

Bee (bees)

Animals, 6.28.070 Keeping of certain animals prohibited

Fish (fish)

Animals, 6.28.010 Prohibited acts pertaining to animals and fowls

Zoning, 17.44.190 Indoor swap meets

Fowl (fowls)

Animals, 6.28.010 Prohibited acts pertaining to animals and fowls

Animals, 6.28.020 Approved handling of animals and fowls

Animals, 6.28.040 Limitation on number of rabbits and fowls kept

Zoning, 17.08.010 Uses permitted in each zone

Garden (garden)

Public Peace, Morals, and Welfare, 9.44.080 Exemptions

Goat (goats, animals)

Animals, 6.28.050 Keeping of other animals restricted

Zoning, 17.08.010 Uses permitted in each zone

Heavy Livestock (cow, sheep, animals)

Animals, 6.28.050 Keeping of other animals restricted

Zoning, 17.08.010 Uses permitted in each zone

Horse (horses, animals)

Animals, 6.28.050 Keeping of other animals restricted

Zoning, 17.08.010 Uses permitted in each zone

Nursery (nurseries)

Public Spaces, 13.20.080 Prohibition of nonessential water use

Business Taxes, Licenses, and Regulations, 5.04.060 Licenses upon which fees are exempt

Zoning, 17.24.060 Number of spaces required - nonresidential uses

Pig (pigs, swine)

Animals, 6.28.070 Keeping of certain animals prohibited

Animals, 6.28.045 Restrictions and limitations on the keeping of potbellied pigs in city limits

Rabbit (rabbits)

Animals, 6.28.040 Limitation on number of rabbits and fowls kept

Zoning, 17.08.010 Uses permitted in each zone

MONTEBELLO

Agricultural Waste (green waste)

Health and Safety, 8.12.090 - Non-exclusive franchise—Grant, grant with conditions or denial

Fish (fish)

Zoning, Appendix A, Index of primary uses

Fowl (fowl, chicken, animal)

Animals, 6.16.030 - Artificial treatment

Animals, 6.16.040 - Sanitary maintenance of premises where kept

Animals, 6.16.100 - Noisy animals

Animals, 6.16.120 - Slaughter

Zoning, 17.12.020 - Permitted uses

Zoning, Appendix A, Index of primary uses

Fruit/Vegetable (fruit, vegetable, crops)

Zoning, 17.12.020 - Permitted uses

Zoning, 17.14.020 - Permitted uses

Zoning, Appendix A, Index of primary uses

Garden (garden)

Public Peace, Morals, and Welfare, 9.12.030 - Permitting water to flow into, upon or along streets

Goat (goat, animal)

Animals, 6.16.120 - Slaughter

Zoning, 17.12.020 - Permitted uses

Zoning, Appendix A, Index of primary uses

Heavy Livestock (livestock, animal)

Animals, 6.16.120 - Slaughter

Zoning, 17.12.020 - Permitted uses

Zoning, Appendix A, Index of primary uses

Horse (horses)

Animals, 6.16.120 - Slaughter

Animals, 6.16.040 - Sanitary maintenance of premises where kept

Zoning, 17.68 Horses

Zoning, Appendix A, Index of primary uses

Horticulture (horticulture)

Zoning, 17.12.020 - Permitted uses

Zoning, 17.14.020 - Permitted uses

Nursery (nurseries)

Zoning, 17.52.050 - Parking space requirements

Zoning, 17.32.150 - Limitations on permitted uses—Outdoor uses

Zoning, 17.62.100 - Signs—C-1, C-2, C-M, M-1 and M-2 zones

Pig (pig, animal)

Animals, 6.16.120 - Slaughter

Zoning, 17.12.020 - Permitted uses

Zoning, Appendix A, Index of primary uses

Rabbit (rabbits, animal)

Animals, 6.16.030 - Artificial treatment

Animals, 6.16.120 - Slaughter

Zoning, 17.12.020 - Permitted uses

Zoning, Appendix A, Index of primary uses

MONTEREY PARK

Bee (bees)

Animals, 8.11.010 Keeping bee hives—Number

Animals, 8.11.020 Keeping bee hives—Distance from residence

Animals, 8.09.030 Exception—Generally

Peace, Safety, and Morals, 9.54.030 Public nuisances designated

Fish (fish)

Animals, 8.09.030 Exception—Generally

Fowl (fowl)

Animals, 8.13 Keeping fowl and rodents

Animals, 8.01.050 Keeping pens in foul condition declared nuisance

Animals, 8.09.030 Exception—Generally

Peace, Safety, and Morals, 9.54.030 Public nuisances designated

Garden (garden, gardens)

Peace, Safety, and Morals, 9.53.070 Exemptions

Zoning, 21.36.130 Required usable open space

Zoning, 21.34.090 Property development standards for mixed-use developments and commercial developments

Goat (goat)

Animals, 8.01.010 Prohibition

Animals, 8.07.060 Impoundment and other fees

Heavy Livestock (livestock, ox, cow, sheep)

Health and Sanitation, 6.16.010 Keeping within city

Animals, 8.01.010 Prohibition

Animals, 8.01.050 Keeping pens in foul condition declared nuisance

Animals, 8.07.060 Impoundment and other fees

Peace, Safety, and Morals, 9.54.030 Public nuisances designated

Horse (horse)

Animals, 8.01.010 Prohibition

Animals, 8.07.060 Impoundment and other fees

Horticulture (horticultural)

Zoning, 21.70.030 Required when

Nursery (nurseries)

Business Licenses and Regulations, 5.12.130 Wholesalers
Zoning, 21.20.030 Principal uses
Zoning, 21.26.030 Principal uses
Zoning, 21.70.030 Required when

Pig (hogs)

Health and Sanitation, 6.16.010 Keeping within city
Animals, 8.11.035 Pigs
Animals, 8.01.010 Prohibition

Animals, 8.07.060 Impoundment and other fees

Rabbit (rabbits)

Animals, 8.13 Keeping fowl and rodents
Animals, 8.01.050 Keeping pens in foul condition declared nuisance

NORWALK

Agricultural Waste (green waste)

Health and Safety, 8.48.210 Residential householder exclusion

Bee (bees)

Zoning, 17.04.200 Animals on residential properties

Fish (fish)

Zoning, 17.10.340 Permitted uses
Zoning, 17.10.260 Permitted uses
Zoning, 17.04.200 Animals on residential properties
Zoning, 17.06.010 Permitted uses
Zoning, 17.06.100 Permitted uses

Farm (farms)

Zoning, 17.08.100 Permitted uses

Fowl (chickens, turkeys, roosters)

Animals, 6.12.060 Artificial treatment
Animals, 6.12.210 Sale or display prohibited
Animals, 6.12.220 Prohibition limited
Animals, 6.12.150 Proximity to certain structures
Animals, 6.12.070 Sanitary maintenance of animals
Animals, 6.12.160 Noisy animals
Animals, 6.12.080 Manure bins and removal of manure
Animals, 6.12.090 Order to clean premises and manure bins
Zoning, 17.04.200 Animals on residential properties
Zoning, 17.06.010 Permitted uses

Garden (gardens)

Zoning, 17.03.020 Water efficient landscape provisions
Zoning, 17.06.100 Permitted uses

Goat (goats)

Animals, 6.12.180 Slaughter of animals prohibited— Exceptions
Zoning, 17.04.200 Animals on residential properties

Heavy Livestock (cow)

Animals, 6.12.080 Manure bins and removal of manure
Animals, 6.12.090 Order to clean premises and manure bins
Animals, 6.12.180 Slaughter of animals prohibited— Exceptions
Zoning, 17.04.200 Animals on residential properties

Horse (horse, horses)

Animals, 6.12.080 Manure bins and removal of manure
Animals, 6.12.090 Order to clean premises and manure bins
Animals, 6.12.180 Slaughter of animals prohibited— Exceptions
Zoning, 17.04.200 Animals on residential properties
Zoning, 17.05 Residential horse property zone

Horticulture (horticultural, flowers)

Zoning, 17.06.100 Permitted uses
Zoning, 17.08.100 Permitted uses
Environment, 18.04.105 Standard urban stormwater mitigation plan (SUSMP) requirements for new development and redevelopment project

Nursery (nurseries)

Animals, 6.12.080 Manure bins and removal of manure
Zoning, 17.08.100 Permitted uses
Zoning, 17.06.020 Limitations on permitted uses
Zoning, 17.06.010 Permitted uses

Pig (pigs)

Animals, 6.12.180 Slaughter of animals prohibited— Exceptions
Zoning, 17.04.200 Animals on residential properties

Rabbit (rabbits)

Animals, 6.12.060 Artificial treatment
Animals, 6.12.210 Sale or display prohibited
Animals, 6.12.220 Prohibition limited
Animals, 6.12.080 Manure bins and removal of manure
Zoning, 17.04.200 Animals on residential properties

PALMDALE

Agricultural Waste (green waste)

Business Licenses, Taxes, and Regulations, 5.52.160 Residential householder exclusion

Bee (apiaries)

Zoning, 30.03 Uses permitted without planning approval
Zoning, 30.09 Standards of development
Animals, 10.76 Apiaries (Los Angeles County Code)

Farm (farm)

Sanitary Sewers and Industrial Waste, 13.05.130 Table A – Sewage units for designated land uses
Sanitary Sewers and Industrial Waste, 13.11.310 Classes of businesses, processes and industries for plan review and inspection fee

Fish (fish)

Health and Safety, 8.08.300 Protection

Fowl (fowl)

Zoning, 30.03 Uses permitted without planning approval
Zoning, 30.04 Uses permitted subject to administrative approval of Planning Director
Zoning, 30.07 Accessory uses and structures permitted
Animals, 10.40 General requirements (Los Angeles County Code)
Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Fruit/Vegetable (crop, fruit, vegetable, nuts)

Sanitary Sewers and Industrial Waste, 13.05.130 Table A – Sewage units for designated land uses

Sanitary Sewers and Industrial Waste, 13.11.310 Classes of businesses, processes and industries for plan review and inspection fee
Zoning, 30.03 Uses permitted without planning approval

Goat (goat)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)
Animals, 10.40 General requirements (Los Angeles County Code)
Animals, 10.56.020 Importation permit-Required when-Stockyard and animal-care standards (Los Angeles County Code)

Heavy Livestock (cattle, sheep, animals)

Zoning, 30.03 Uses permitted without planning approval
Zoning, 30.04 Uses permitted subject to administrative approval of Planning Director
Zoning, 30.07 Accessory uses and structures permitted
Animals, 10.32.040-050 Animals running at large (Los Angeles County Code)
Animals, 10.40 General requirements (Los Angeles County Code)
Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)
Animals, 10.60 Tuberculosis control (Los Angeles County Code)
Animals, 10.68.020 Sanitation requirements generally (Los Angeles

County Code)

Horse (horse)

Zoning, 30.03 Uses permitted without planning approval

Zoning, 30.04 Uses permitted subject to administrative approval of Planning Director

Zoning, 30.07 Accessory uses and structures permitted

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Garden (garden)

Health and Safety, 8.10.020 Declaration of public nuisance

Goat (goats)

Zoning, 30.03 Uses permitted without planning approval

Zoning, 30.04 Uses permitted subject to administrative approval of Planning Director

Zoning, 30.07 Accessory uses and structures permitted

Nursery (nurseries)

Sanitary Sewers and Industrial Waste, 13.05.130 Table A – Sewage units for designated land uses

Pig (pig)

Animals, 10.28.061-062 Keeping and breeding pygmy pigs - License required (Los Angeles County Code)

Animals, 10.32.040 Livestock and poultry at large deemed misdemeanor - Exceptions (Los Angeles County Code)

Animals, 10.40 General requirements (Los Angeles County Code)

Animals, 10.52 Stockyards and hog ranches (Los Angeles County Code)

Animals, 10.56.010-060 Importing of animals (Los Angeles County Code)

Animals, 10.68.020 Sanitation requirements generally (Los Angeles County Code)

Animals, 10.90.010 Licensing fees schedule (Los Angeles County Code)

Rabbit (animal, rabbit)

Zoning, 30.03 Uses permitted without planning approval

Zoning, 30.04 Uses permitted subject to administrative approval of Planning Director

Zoning, 30.07 Accessory uses and structures permitted

Animals, 10.40 General requirements (Los Angeles County Code)

PALOS VERDES ESTATES

Agricultural Waste (green waste)

Health and Safety, 8.16.035 Unlawful transport of waste materials

Health and Safety, 8.16.050 Refuse accumulation and disposal – Standing water and other waste

Bee (bees)

Health and Safety, 8.48.015 Public nuisances designated

Fish (fish)

Animals, 6.04.020 Animals other than household pets restricted – Exceptions

Fowl (fowl, poultry)

Animals, 6.04.020 Animals other than household pets restricted – Exceptions

Health and Safety, 8.48.015 Public nuisances designated

Fruit/Vegetable (vegetable, crops)

Zoning, 18.04.020 Conditional use

Zoning, 18.04.010 Uses permitted

Goat (goat, livestock)

Animals, 6.04.020 Animals other than household pets restricted – Exceptions

Health and Safety, 8.48.015 Public nuisances designated

Heavy Livestock (livestock)

Animals, 6.04.020 Animals other than household pets restricted – Exceptions

Health and Safety, 8.48.015 Public nuisances designated

Horse (horses, livestock)

Animals, 6.04.020 Animals other than household pets restricted – Exceptions

Health and Safety, 8.48.015 Public nuisances designated

Horticulture (horticulture)

Zoning, 18.04.020 Conditional use

Nursery (nurseries)

Zoning, 18.04.020 Conditional use

Pig (pig, hog, livestock)

Animals, 6.04.020 Animals other than household pets restricted – Exceptions

Health and Safety, 8.48.015 Public nuisances designated

Rabbit (rabbits)

Animals, 6.04.020 Animals other than household pets restricted – Exceptions

PARAMOUNT

Agricultural Waste (compost, green waste, worm)

Refuse, Garbage and Weeds, Sec. 33-9 (f) Unlawful collection and removal.

Licenses, Sec. 26-55 35. (b,h) Refuse, Rubbish, Solid Waste, Garbage, Recycling, Electronic waste or Medical Waste

Zoning: General Provisions, Conditions and Exceptions, Sec. 44-104.5

Development of Worm Farms

Zoning: M-2 Sec. 44-82 (51) Same - Uses requiring conditional use permit.

Fish (fish)

Zoning: R-1 Sec. 44-19 (f)(2) Permitted uses.

Zoning: R-2 Sec. 44-30 (f)(1) Permitted uses.

Zoning: M-2 Sec. 44-82 (17) Same - Uses requiring conditional use permit.

Fowl (fowl)

Animal Control, Sec. 5-6.3 Running at large prohibited - Fowl and rabbits.

Zoning: R-1, Sec. 44-19 (f)(2) Permitted uses.

Zoning: R-2, Sec. 44-30 (f)(2) Permitted uses.

Fruit/Vegetable (crops)

Zoning: R-1, Sec. 44-19 (c) Permitted uses.

Goat (goat)

Animal Control, Sec. 5-6.2 Running at large prohibited - Other animals.

Animal Control, Sec. 5-9.12 Slaughter of animals.

Animal Control, Sec. 5-17 Butchering of certain animals prohibited.

Zoning: R-1 Sec. 44-19 (f)(2) Permitted uses.

Zoning: R-2 Sec. 44-30 (f)(2) Permitted uses.

Heavy Livestock (cattle, cow, dairy, ox, sheep)

Animal Control, Sec. 5-6.2 Running at large prohibited - Other animals.

Animal Control, Sec. 5-9.12 Slaughter of animals.

Animal Control, Sec. 5-17 Butchering of certain animals prohibited.

Zoning: R-1 Sec. 44-19 (f)(2) Permitted uses.

Zoning: R-2 Sec. 44-30 (f)(2) Permitted uses.

Zoning: M-1 Sec. 44-75 (18) Permitted uses - Generally.

Licenses, Sec. 26-55 (22) Special license fees for certain businesses, professions, trades and occupations.

Horse (horse)

Animal Control, Sec. 5-6.2 Running at large prohibited - Other animals.

Animal Control, Sec. 5-9.12 Slaughter of animals.

Animal Control, Sec. 5-15 Keeping horses in certain residential areas.

Animal Control, Sec. 5-17 Butchering of certain animals prohibited.

Business Regulations, Sec. 11-3 Records of operation of slaughter-houses.

Zoning: R-1, Sec. 44-19 (f)(2) Permitted uses.

Zoning: R-2, Sec. 44-30 (f)(2) Permitted uses.

Horticulture (horticulture)

Zoning: C-3, Sec. 44-63 (a)(28) Permitted uses.

Zoning: C-M, Sec. 44-70 (3)(e) Same - Limitations.

Nursery (nursery, nurseries)

Zoning: C-3, Sec. 44-63 (a)(28) Permitted uses.

Zoning: C-M, Sec. 44-70 (3)(e) Same - Limitations.

Pig (swine)

Animal Control, Sec. 5-9.12 Slaughter of animals.

Animal Control, Sec. 5-17 Butchering of certain animals prohibited.

Rabbit (rabbit)

Animal Control Sec. 5-6.3 Running at large prohibited - Fowl and rabbits.

Zoning: R-1 Sec. 44-19 (f)(2) Permitted uses.

Zoning: R-2 Sec. 44-30 (f)(2) Permitted uses.

PASADENA

Agricultural Waste (waste)

Health and Safety, 8.28.020 Dumping or accumulating rubbish prohibited.

Bees (bee)

Health and Safety, 8.28.110 Insect control measures.

Fish (fish)

Health and Safety, 8.16.080 Nonenclosure exceptions.

Health and Safety, 8.28.100 Insect breeding conditions prohibited.

Farm (farm)

Subdivisions, 16.12.210 Acre or large lot subdivisions.

Fowl (fowl, chickens, turkeys, geese)

Animals, 6.20.020 Fowls and rabbits - Prohibited at large.

Animals, 6.20.030 Fowls and rabbits - Keeping.

Animals, 6.20.040 Fowls and rabbits - Number allowed.

Animals, 6.20.050 Fowls and rabbits - Artificial treatment.

Animals, 6.20.060 Fowls and rabbits - Sale of young.

Animals, 6.20.070 Fowls and rabbits - Business display.

Animals, 6.20.120 Noisy animals.

Animals, 6.20.130 Keeping closer than 100 feet to inhabited structures, schools or hospitals.

Animals, 6.32.010 Cleanliness of premises where animals kept.

Animals, 6.32.040 Manure - Removal procedures.

Animals, 6.32.050 Manure - Premises cleaning and disinfecting.

Public Peace, Morals and Welfare, 9.36.150 Animals and fowl.

Fruit/Vegetable (fruit, vegetables)

Animals, 6.32.040 Manure - Removal procedures.

Utilities and Sewers, 13.10.040 Level 1 water supply shortage.

Garden (garden)

Utilities and Sewers, 13.22.030 Definitions.

Goat (goat)

Animals, 6.20.010 Prohibited acts.

Animals, 6.20.100 Keeping goats.

Animals, 6.20.120 Noisy animals.

Animals, 6.20.130 Keeping closer than 100 feet to inhabited structures, schools or hospitals.

Animals, 6.32.040 Manure - Removal procedures.

Animals, 6.32.050 Manure - Premises cleaning and disinfecting.

Heavy Livestock (livestock, cattle, ox, cow, sheep)

Revenue and Finance, 4.107.330 Boundaries of district - Inclusion of lands devoted to agricultural, timber or livestock uses.

Animals, 6.20.010 Prohibited acts.

Animals, 6.20.080 Keeping cattle.

Animals, 6.20.120 Noisy animals.

Animals, 6.20.130 Keeping closer than 100 feet to inhabited structures, schools or hospitals.

Animals, 6.32.040 Manure - Removal procedures.

Animals, 6.32.050 Manure - Premises cleaning and disinfecting.

Utilities and Sewers, 13.24.620 Maintenance of plants, interceptors and other facilities.

Horse (horse)

Animals, 6.20.010 Prohibited acts.

Animals, 6.20.090 Regulations for keeping horses.

Animals, 6.20.120 Noisy animals.

Animals, 6.20.130 Keeping closer than 100 feet to inhabited structures, schools or hospitals.

Animals, 6.32.040 Manure - Removal procedures.

Animals, 6.32.050 Manure - Premises cleaning and disinfecting.

Nursery (nursery)

Revenue and Finance, 4.53.030 Sewer facility charge.

Pig (hog)

Animals, 6.20.110 Hogs declared nuisance.

Animals, 6.32.040 Manure - Removal procedures.

Animals, 6.32.050 Manure - Premises cleaning and disinfecting.

Rabbit (rabbit)

Animals, 6.20.020 Fowls and rabbits - Prohibited at large.

Animals, 6.20.030 Fowls and rabbits - Keeping.

Animals, 6.20.040 Fowls and rabbits - Number allowed.

Animals, 6.20.050 Fowls and rabbits - Artificial treatment.

Animals, 6.20.060 Fowls and rabbits - Sale of young.

Animals, 6.20.070 Fowls and rabbits - Business display.

Animals, 6.20.130 Keeping closer than 100 feet to inhabited structures, schools or hospitals.

Animals, 6.32.040 Manure - Removal procedures.

Animals, 6.32.050 Manure - Premises cleaning and disinfecting.

PICO RIVERA

Agricultural Waste (green waste)

Health and Safety, 8.12.340 Tree or garden trimmings.

Bees (bee)

Animals, 6.44.040 Vector control measures.

Zoning, 18.50.090 Prohibited animals designated.

Fish (fish)

Zoning, 18.40.040 Land use chart - Contents.

Fowl (fowl, poultry, chickens, rooster, geese)

Animals, 6.04.150 Keeping of animals - Sanitary premises.

Animals, 6.04.180 Baby chickens, ducks or rabbits.

Animals, 6.04.200 Noisy animals.

Animals, 6.16.020 Sale or gift prohibited when.

Animals, 6.16.030 Poultry shops, farmers and breeders.

Zoning, 18.17.040 Single-family development standards.

Zoning, 18.40.040 Land use chart - Contents.

Zoning, 18.50.040 Poultry, fowl, rabbits and small animals.

Zoning, 18.50.060 Sanitation and health regulations.

Zoning, 18.50.080 Noisy animals, poultry and fowl.

Zoning, 18.50.090 Prohibited animals designated.

Garden (garden)

Health and Safety, 8.12.340 Tree or garden trimmings.

Goat (goat)

Animals, 6.04.230 Slaughter of animals.

Animals, 6.36.040 Livestock and other animals.

Zoning, 18.50.070 Livestock in residential and commercial zones.

Livestock (livestock, cattle, cow, ox, sheep)

Animals, 6.04.230 Slaughter of animals.

Animals, 6.36.040 Livestock and other animals.

Zoning, 18.50.070 Livestock in residential and commercial zones.

Buildings and Construction, 15.08.030 Swimming pools.

Horse (horse)

Animals, 6.04.230 Slaughter of animals.

Animals, 6.36.040 Livestock and other animals.

Zoning, 18.50.050 Horses.

Nursery (nurseries)

Zoning, 18.40.040 Land use chart - Contents.

Pig (swine)

Animals, 6.04.230 Slaughter of animals.

Zoning, 18.50.090 Prohibited animals designated.

Rabbit (rabbit)

Animals, 6.04.180 Baby chickens, ducks or rabbits.

Animals, 6.16.020 Sale or gift prohibited when.

POMONA

Agricultural Waste (compost)

Utilities, 62-842 Management facilities.

Bees (bee)

Animals, 6-4(3) Certain animals and reptiles prohibited.

Fish (fish)

Zoning, .221 (G)(5) Uses permitted.

Zoning, .411 (B)(5)(f) Uses permitted.

Zoning, .580 (J) Conditional use permits.

Fowl (poultry, chicken, fowl, turkey, geese, roosters)

Zoning, .55123 Nonconforming rabbit and poultry ranches.

Zoning, .5595 Poultry processing plants and animal slaughtering facilities - Amortization period.

Zoning, .5809-9 (C, E) Maintaining of animals.

Animals, 6-3 Slaughtering and slaughterhouses.

Animals, 6-5 Roosters prohibited.

Fruit/Vegetable (crops)

Zoning, .221 (F) Uses permitted.

Environment, 18-305 (4) Exemptions.

Garden (garden)

Taxation, 50-456(c)(4)(j) Rate of additional tax.

Goat (goat)

Zoning, .5809-9 (C) Maintaining of animals.

Animals, 6-3 Slaughtering and slaughterhouses.

Animals, 6-4(4) Certain animals and reptiles prohibited.

Rabbit (rabbit)

Zoning, .55123 Nonconforming rabbit and poultry ranches.

Zoning, .5809-9 (C, E) Maintaining of animals.

Animals, 6-3 Slaughtering and slaughterhouses.

Heavy Livestock (cattle, dairy, sheep)

Zoning, .5809-9 (C) Maintaining of animals.

Animals, 6-3 Slaughtering and slaughterhouses.

Horse (horse)

Zoning, .5809-9 (C) Maintaining of animals.

Zoning, .316 (C)(2)(j) Uses permitted.

Animals, 6-3 Slaughtering and slaughterhouses.

Nursery (nursery)

Zoning, 5809-23 (E)(3) Oak tree preservation.

Pig (hogs, swine)

Animals, 6-3 Slaughtering and slaughterhouses.

Animals, 6-4(1) Certain animals and reptiles prohibited.

RANCHO PALOS VERDES

Agricultural Waste (compost)

Zoning, 17.46.060 (B)(1) Development Standards.

Bees (bee)

Zoning, 17.02.020 (G) Uses and development permitted.

Fish (fish)

Streets, Sidewalks, and Public Places 12.16.110 Hunting prohibited.

Building and Construction, 15.18.100 (111A.3) Administrative Code amended - Use and occupancy.

Fowl (fowl)

Streets, Sidewalks, and Public Places 12.16.110 Hunting prohibited.

Fruit/Vegetable (fruit, vegetable, crop, berries)

Zoning, 17.02.020 (H) Uses and development permitted.

Zoning, 17.02.025 (A) Uses and development permitted by conditional use permit.

Zoning, 17.04.030 (E) Uses and development permitted by conditional use permit.

Zoning, 17.32.030 (J) Uses and development permitted.

Zoning, 17.44.020 (A) Uses and development permitted.

Garden (garden)

Buildings and Construction, 15.20.050 Landslide mitigation measures required.

Zoning, 17.48.030 (E)(5) Setbacks.

Zoning, 17.48.040 (B) Open space area.

Goat (goat)

Animals, 6.04.050 Animals prohibited on beaches.

Zoning, 17.46.010-090 Equestrian Overlay (Q) District

Zoning, 17.76.115 Large domestic animal permits.

Heavy Livestock (cattle)

Animals, 6.04.050 Animals prohibited on beaches.

Zoning, 17.46.010-090 Equestrian Overlay (Q) District

Zoning, 17.76.115 Large domestic animal permits.

Horse (horse)

Animals, 6.04.050 Animals prohibited on beaches.

Zoning, 17.02.025 (B) Uses and development permitted by conditional use permit.

Zoning, 17.46.010-090 Equestrian Overlay (Q) District

Zoning, 17.50.020 Parking requirements.

Zoning, 17.76.115 Large domestic animal permits.

Horticulture (horticulture, flower)

Public Services, 13.10.030 (FF) Definitions.

Zoning, 17.02.025 (B) Uses and development permitted by conditional use permit.

Zoning, 17.14.030 (B) Uses and development permitted by conditional use permit.

Zoning, 17.16.030 (E) Uses and development permitted by conditional use permit.

Zoning, 17.20.030 (E) Uses and development permitted by conditional use permit.

Zoning, 17.22.030 (B) Uses and development permitted by conditional use permit.

Zoning, 17.34.030 (C) Uses and development permitted.

Zoning, 17.41.040 (F) Definitions.

Zoning, 17.44.020 (A) Uses and development permitted.

Nursery (nursery)

Public Services, 13.10.030 (F) Definitions.

Zoning, 17.02.025 (B) Uses and development permitted by conditional use permit.

Zoning, 17.20.030 (E) Uses and development permitted by conditional use permit.

Zoning, 17.22.030 (B) Uses and development permitted by conditional use permit.

Zoning, 17.44.020 (A) Uses and development permitted.

Zoning, 17.44.030 (B) Uses and development permitted by conditional use permit.

Pig (swine)

Animals, 6.04.050 Animals prohibited on beaches.

REDONDO BEACH

Fish (fish)

Sanitation and Health, 5-1.401 Definitions.

Business, Professions, and Trades, 6-1.22 (d)(2) License rates.

Fowl (fowl, chickens, turkeys, geese)

Sanitation and Health, 5-1.401 Definitions.

Public Welfare, Morals, and Conduct, 4-10.02 (a)(3) Declared and prohibited nuisances.

Public Welfare, Morals, and Conduct, 4-24.502 Animals and fowl

Public Welfare, Morals, and Conduct, 4-32.02 Police services.

Fruit/Vegetable (vegetable, crops)

Administration, 2-11.02 Time period for presentation of claims.

Public Welfare, Morals, and Conduct, 4-10.02 (c,d) Declared and prohibited nuisances.

Harbor and Beaches, 12-3.07 Littering ocean waters.

Garden (garden)

Public Welfare, Morals, and Conduct, 4-24.507 (a) Domestic power tools.

Goat (goat)

Sanitation and Health, 5-1.401 Definitions.

Heavy Livestock (livestock, cows, sheep)

Business, Professions, and Trades, 6-1.22 (h)(5) License rates.

Sanitation and Health, 5-1.401 Definitions.

Horse (horse)

Sanitation and Health, 5-1.401 Definitions.

Horticulture (horticulture, flower)

Public Welfare, Morals, and Conduct, 4-35.18 Damaging vegetation in parks.

Sanitation and Health, 5-7.103 Definitions.

Planning and Zoning, 10-2.402 (a)(125) Definitions.

Planning and Zoning, 10-5.402 (a)(136) Definitions.

Nursery (nursery)

Business, Professions, and Trades, 6-1.22 (d)(2) License rates.

Planning and Zoning, 10-2.402 (a)(125) Definitions.

Planning and Zoning, 10-2.610-640 Land use regulations...

Planning and Zoning, 10-2.910 Land use regulations...

Planning and Zoning, 10-2.1110 Land use regulations...

Planning and Zoning, 10-2.1526 (a)(1) Outside storage and displays in all zones.

Planning and Zoning, 10-5.402 (a)(136) Definitions.

Planning and Zoning, 10-5.1110 Land use regulations...

Planning and Zoning, 10-5.1526 (a)(1) Outside storage and displays in all zones.

Planning and Zoning, 10-5.610-640 Land use regulations...

Planning and Zoning, 10-5.710 Land use regulations...

Planning and Zoning, 10-5.910 Land use regulations...

Building Regulations, 9-1.02 (105.2)(10) Permit required.

Building Regulations, 9-22.03 (105.2)(10) Permit required.

Pig (pig)

Sanitation and Health, 5-1.401 Definitions.

Rabbit (rabbit)

Sanitation and Health, 5-1.401 Definitions.

ROLLING HILLS

Agricultural Waste (green waste, compost)

Health and Safety, 8.08.020 Definitions.

Health and Safety, 8.08.420 Collection of green waste.

Health and Safety, 8.08.430 Backyard residential composting.

Health and Safety, 8.08.540 Residential waste and recyclable exclusion.

Zoning, 17.18.130 (B) Maintenance requirements.

Bees (bee)

Animals, 6.32.060 Bees - Limitations.

Fowl (fowl, poultry, chickens, turkeys, geese)

Animals, 6.28.190 Fees - Other animals.

Animals, 6.32.020 Fowls and rabbits - Limitations.

Animals, 6.40.010 Clean premises required.

Animals, 6.40.060 Excrement disposal.

Animals, 6.40.070 Compliance with cleaning order required.

Fruit/Vegetable (fruit, vegetable, crop)

Animals, 6.40.060 Excrement disposal.

Health and Safety, 8.08.430 Backyard residential composting.

Zoning, 17.26.030 Desirable and undesirable trees.

Zoning, Appendix, Index of permitted uses by zone district.

Goat (goat)

Animals, 6.32.050 Goats - Limitations.

Animals, 6.48.050 Livestock and wild species keeping requirements.

Heavy Livestock (livestock, cow, cattle, ox, sheep)

Animals, 6.08.020 Animal

Animals, 6.32.070 Cattle - Limitations.

Animals, 6.40.060 Excrement disposal.

Animals, 6.40.070 Compliance with cleaning order required.

Animals, 6.48.050 Livestock and wild species keeping requirements.

Horse (horse)

Animals, 6.32.030 Horses, donkeys and mules - Limitations.

Animals, 6.32.040 Stallions and jacks - Fencing requirements.

Animals, 6.48.050 Livestock and wild species keeping requirements.

Pig (swine)

Animals, 6.08.020 Animal.

Animals, 6.48.060 Keeping swine.

Rabbit (rabbit)

Animals, 6.28.190 Fees - Other animals.

Animals, 6.32.020 Fowls and rabbits - Limitations.

Animals, 6.40.060 Excrement disposal.

Animals, 6.40.070 Compliance with cleaning order required.

ROLLING HILLS ESTATES

Agricultural Waste (green waste)

Health and Safety, 8.20.020 Findings - Purpose of provisions

Health and Safety, 8.20.220 Use of garbage, green waste and recycling carts

Health and Safety, 8.20.230 Use of bags, bundles or resident-provided green waste containers

Bees (bee/hive)

Zoning, 17.46.020 Type and number permitted

Fish (fish)

Health and Safety, 8.36.050 Swimming pools - Enclosure required

Zoning, 17.22.020 (B) Permitted uses

Farm (farm)

Zoning, 17.16.020 (A) Permitted uses

Zoning, 17.15.020 (E) Permitted uses

Zoning, 17.22.020 (F) Permitted uses

Zoning, 17.22.020 (I) Permitted uses

Zoning, 17.34.030 (B)(8) Permitted uses

Zoning, 17.72.030 (B) Certificate of occupancy

Fowl (fowl, chicken)

Health and Safety, 8.04.030 Section 11.16.090 amended

Health and Safety, 8.32.170 Prohibitions - Animals and fowl

Zoning, 17.46.020 Type and number permitted

Fruit/Vegetable (crop, berry)

Zoning, 17.15.020 (E) Permitted uses

Zoning, 17.16.020 (A) Permitted uses

Zoning, 17.34.030 (B) Permitted uses

Zoning, 17.22.020 (I) Permitted uses

Garden (garden)

Zoning, 17.15.020 (E) Permitted uses
Zoning, 17.16.020 (A) Permitted uses
Zoning, 17.20.030 (G) Permitted uses
Zoning, 17.22.020 (I) Permitted uses
Zoning, 17.30.020 (B) Permitted uses
Zoning, 17.34.030 (B) Permitted uses
Zoning, 17.72.030 (B) Certificates of occupancy

Goat (goats)

Zoning, 17.22.020 (F) Permitted uses
Zoning, 17.46.020 Type and number permitted

Heavy Livestock (sheep, cattle)

Zoning, 17.22.020 (F) Permitted uses
Zoning, 17.46.020 Type and number permitted

Horse

Zoning, 17.22.020 (F,H) Permitted uses
Zoning, 17.36.010-050 H District

Horticulture (horticulture, flower)

Zoning, 17.15.020 (E) Permitted uses
Zoning, 17.16.020 (A) Permitted uses
Zoning, 17.30.020 (B) Permitted uses
Zoning, 17.34.030 (B) Permitted uses

Nursery (nursery, nurseries)

Zoning, 17.16.020 (A) Permitted uses
Zoning, 17.22.020 (I) Permitted uses
Zoning, 17.30.020 (C) Permitted uses
Zoning, 17.34.030 (B) Permitted uses

Rabbit (rabbit)

Zoning, 17.46.020 Type and number permitted

ROSEMEAD

Agricultural Waste (compost, worm)

Health and Safety, 8.32.050 Other storage prohibited - Private property composting
Zoning, 17.64.020 (C) Permitted uses

Bees (bee, hive)

Animals, 6.04.050 Bees
Zoning, 17.64.020 (C) Permitted uses

Fish (fish)

Zoning, 17.64.020 (C) Permitted uses
Zoning, 17.56.020 (C) Permitted uses

Farm (farm)

Zoning, 17.40.020 (C) Permitted uses
Zoning, 17.124.090 (A) Certificate of occupancy

Fowl (fowl, poultry, rooster)

Animals, 6.04.010 Keeping of certain animals prohibited
Animals, 6.04.020 Certain animals as novelties prohibited
Animals, 6.04.040 (D) Miscellaneous animals: monkeys, horses, chickens and ducks
Animals, 6.04.070 Fowl and rabbits not to run at large
Animals, 6.04.090 Cleanliness of premises where animals are kept
Zoning, 17.12.105 Amortization of nonconforming poultry slaughter business
Zoning, 17.64.020 (C) Permitted uses

Fruit/Vegetable (fruit, vegetable, crop, berry)

Animals, 6.04.110 Manure bins and removal of manure
Revenue and Finance, 3.20.030 Presenting and filing
Zoning, 17.16.020 (D) Permitted uses
Zoning, 17.56.020 (B) Permitted uses
Zoning, 17.64.020 (B) Permitted uses

Garden (garden)

Zoning, 17.16.020 (D) Permitted uses

Zoning, 17.64.020 (B) Permitted uses

Zoning, 17.124.090 (A) Certificate of occupancy

Goat (goat)

Animals, 6.04.060 Other animals running at large
Animals, 6.04.090 Cleanliness of premises where animals are kept

Heavy Livestock (livestock, cow, sheep, ox, dairy)

Animals, 6.04.060 Other animals running at large
Animals, 6.04.090 Cleanliness of premises where animals are kept
Zoning, 17.64.020 (D) Permitted uses
Zoning, 17.56.020 (C) Permitted uses
Zoning, 17.112.030 (2) Uses permitted in specific zones

Horse (horse)

Animals, 6.04.040 (C) Miscellaneous animals: monkeys, horses, chickens and ducks

Animals, 6.04.060 Other animals running at large

Animals, 6.04.090 Cleanliness of premises where animals are kept
Zoning, 17.64.020 (D,E) Permitted uses

Horticulture (horticulture, flower)

Zoning, 17.12.060 (E) Nonconforming buildings and uses generally
Zoning, 17.16.020 (D) Permitted uses
Zoning, 17.36.020 (A) Permitted uses
Zoning, 17.40.020 (B) Permitted uses
Zoning, 17.64.020 (B) Permitted uses
Zoning, 17.44.020 (B) Permitted uses

Nursery

Animals, 6.04.110 Manure bins and removal of manure
Zoning, 17.12.060 (E) Nonconforming buildings and uses generally
Zoning, 17.16.020 (D) Permitted uses
Zoning, 17.36.020 (A) Permitted uses
Zoning, 17.40.020 (C) Permitted uses
Zoning, 17.44.020 (B) Permitted uses
Zoning, 17.56.100 Outside display of merchandise
Zoning, 17.64.020 (B) Permitted uses
Zoning, 17.112.020 (19) Uses permitted in any zone

Pig (pig, hog, swine)

Animals, 6.04.010 Keeping of certain animals prohibited

Rabbit (rabbit)

Animals, 6.04.020 Certain animals as novelties prohibited
Animals, 6.04.070 Fowl and rabbits not to run at large
Animals, 6.04.090 Cleanliness of premises where animals are kept
Zoning, 17.64.020 (C) Permitted uses

SAN DIMAS

Agricultural Waste (worm)

Zoning, 18.64.030 Uses permitted by conditional use permit

Bee (apiaries)

Zoning, 18.124.020 (B) Uses permitted

Fish (fish)

Health and Safety, 8.24.010 Enclosures - Exceptions

Farm (farm)

Zoning, 18.64.020 (B) Uses permitted
Zoning, 18.124.020 (A) (1) Uses permitted
Zoning, 18.124.020 (B) Uses permitted
Zoning, 18.162.080 (A) Exceptions

Fowl (fowl, chicken, rooster, geese, egg)

Animals, 6.28.010 Coloring prohibited
Animals, 6.28.020 Sale—Display—When prohibited
Animals, 8.36.110 Loud and/or unusual noises.
Zoning, 18.20.060 Animals
Zoning, 18.28.020 Uses permitted
Zoning, 18.64.020 (B) Uses permitted
Zoning, 18.64.030 (D) Uses permitted

Zoning, 18.112.030 Uses permitted
Zoning, 18.504.060 Incidental and accessory uses
Zoning, 18.504.260 Incidental and accessory uses
Fruit/Vegetable (crop)
Zoning, 18.28.020 Uses permitted
Zoning, 18.124.020 (B) Uses permitted
Zoning, 18.128.080 Uses permitted
Garden (gardens)
Zoning, 18.24.020 Uses permitted
Zoning, 18.35.020 Uses permitted
Zoning, 18.124.020 (B) Uses permitted
Zoning, 18.512.070 Primary uses permitted
Goat (goat)
Zoning, 18.20.060 Animals
Zoning, 18.28.020 Uses permitted
Zoning, 18.64.020 (B) Uses permitted
Zoning, 18.112.030 Uses permitted
Heavy Livestock (livestock, cattle, sheep, dairies)
Zoning, 18.28.020 Uses permitted
Zoning, 18.64.020 (B) Uses permitted
Zoning, 18.64.030 Uses permitted by conditional use permit
Zoning, 18.112.030 Uses permitted
Zoning, 18.204.170 Nonconforming uses.
Horse (horse)
Zoning, 18.28.020 Uses permitted
Zoning, 18.28.040 Keeping of horses
Zoning, 18.64.020 (B) Uses permitted
Zoning, 18.64.030 Uses permitted by conditional use permit
Zoning, 18.108.050 Improvements within designated setbacks
Zoning, 18.112.010-030 Private Horse Overlay
Zoning, 18.156.050 Automobile parking spaces required
Zoning, 18.204.170 Nonconforming uses
Zoning, 18.504.070 Uses in the equestrian area and scenic easement area
Zoning, 18.504.330 Horse corrals
Zoning, 18.542.130 Conditional uses
Zoning, 18.504.260 Incidental and accessory uses
Zoning, 18.542.380 Horsekeeping
Horticulture (horticulture)
Zoning, 18.64.020 (B) Uses permitted
Zoning, 18.124.020 (B) Uses permitted
Nursery (nursery, nurseries)
Zoning, 18.28.020 Uses permitted
Zoning, 18.92.030 Conditional uses
Zoning, 18.132.020 Permitted uses
Zoning, 18.156.050 Automobile parking spaces required
Zoning, 18.162.080 (A) Exceptions
Zoning, 18.530.070 Conditional uses
Pig (pig, hog)
Zoning, 18.20.050 Hogs
Zoning, 18.28.020 Uses permitted
Zoning, 18.28.050 Keeping of potbellied pigs as domestic pets
Rabbit (rabbit)
Animals, 6.28.010 Coloring prohibited
Animals, 6.28.020 Sale—Display—When prohibited
Zoning, 18.64.020 (B) Uses permitted
Zoning, 18.112.030 Uses permitted
Zoning, 18.504.060 Incidental and accessory uses
Zoning, 18.512.070 Primary uses permitted

SAN FERNANDO

Agricultural Waste (green waste, compost)

Solid Waste and Recyclables Collection Services, 70-12 Contents

Solid Waste and Recyclables Collection Services, 70-51 Residential householder exclusion
Solid Waste and Recyclables Collection Services, 70-102-104 Containers Streets, Sidewalks, and Other Public Places, 74-189 Waste material obstructing traffic
Zoning, 106-1143 Public nuisance conditions
Bees (bee, hive)
Animals, 14-5 Bees
Farm (farm)
Peddlers and Solicitors, 58-57 Application for permit; fee
Fish (fish)
Businesses, 22-123 Cold storage plants
Fowl (fowl, poultry, chicken, egg)
Animals, 14-3 Keeping near dwellings, schools, hospitals or similar institutions
Animals, 14-4 Poultry and rabbits
Animals, 14-8 Control of fly breeding and odor nuisance
Animals, 14-9 Removal of manure, soil droppings and bedding
Businesses, 22-168 Slaughterhouses, meat packers, etc
Businesses, 22-123 Cold storage plants
Secondhand Goods, 66-142 Prohibited sales, trades, exchanges or bartering
Fruit/Vegetable (fruit, vegetable)
Businesses, 22-123 Cold storage plants
Utilities, 94-299 Prohibitions
Zoning, 106-352 Permitted uses
Zoning, 106-518 Uses permitted subject to conditional use permit
Garden (garden)
Utilities, 94-299 Prohibitions
Zoning, 106-352 Permitted uses
Goat (goat)
Animals, 14-11 Enclosure required for breeding
Animals, 14-76 Keeping generally
Animals, 14-77 Manner of tethering
Animals, 14-78 Permit to keep in open corral
Animals, 14-79 Restrictions on location for keeping
Heavy Livestock (livestock, cow, dairy, sheep, ox)
Animals, 14-11 Enclosure required for breeding
Animals, 14-76 Keeping generally
Animals, 14-77 Manner of tethering
Animals, 14-78 Permit to keep in open corral
Animals, 14-79 Restrictions on location for keeping
Businesses, 22-123 Cold storage plants
Horse (horse)
Animals, 14-11 Enclosure required for breeding
Animals, 14-77 Manner of tethering
Animals, 14-78 Permit to keep in open corral
Animals, 14-79 Restrictions on location for keeping
Horticultural (horticulture, flower)
Peddlers and Solicitors, 58-94 Designation of sales area; limitation on number of vendors
Peddlers and Solicitors, 58-126 Required
Peddlers and Solicitors, 58-127 Application
Peddlers and Solicitors, 58-129 Issuance; contents
Peddlers and Solicitors, 58-131 Renewal
Streets, Sidewalks, and Other Public Places, 74-192 Ornamental trees and shrubs
Utilities, 94-299 Prohibitions
Zoning, 106-352 Permitted uses
Zoning, 106-488 Uses permitted subject to conditional use permit
Zoning, 106-517 Permitted uses

Nursery (nurseries)

Zoning, 106-517 Permitted uses

Zoning, 106-547 Permitted uses

Zoning, 106-822 Parking spaces required

Pig (pig, swine)

Animals, 14-76 Keeping generally

Businesses, 22-168 Slaughterhouses, meat packers, etc

Rabbits (rabbit)

Animals, 14-4 Poultry and rabbits

Businesses, 22-168 Slaughterhouses, meat packers, etc

SAN GABRIEL

Agricultural Waste (compost)

Solid Waste Collection and Recycling, 50.007 Other storage prohibited; private property composting

Bees (bee, hive)

Animals, 92.20 Purpose

Animals, 92.21 Definitions

Animals, 92.22 Keeping bees restricted

Farm (farm)

Land Usage (Zoning), 153.151 Use regulations

Fish (fish)

General Business Licenses, 110.61 Classification A: Manufacturing, processing and wholesale and retail businesses and services

Fowl (fowl, poultry, chicken, rooster, turkey, geese)

Animals, 92.01 Age when offspring are considered animals

Animals, 92.02 Keeping certain animals and fowl prohibited; exceptions

General Business Licenses, 110.61 Classification A: Manufacturing, processing and wholesale and retail businesses and services

Fruit/Vegetable (fruit, vegetable)

Trees and Shrubs; Weeds, 95.23 Exemptions

General Business Licenses, 110.61 Classification A: Manufacturing, processing and wholesale and retail businesses and services

Land Usage (Zoning), 153.031 (F) Uses permitted

Garden (garden)

Land Usage (Zoning), 153.031 (F) Uses permitted

Goat (goat)

Animals, 92.02 Keeping certain animals and fowl prohibited; exceptions

Heavy Livestock (cow, dairy)

Animals, 92.02 Keeping certain animals and fowl prohibited; exceptions

General Business Licences, 110.67 Classification T: Motor vehicles

Horticulture (horticulture)

Land Usage (Zoning), 153.151 Use regulations

Horse (horse)

Animals, 92.02 Keeping certain animals and fowl prohibited; exceptions

Nursery (nurseries)

General Business Licenses, 110.61 Classification A: Manufacturing, processing and wholesale and retail businesses and services

Land Usage (Zoning), 153.151 Number of parking spaces required

Rabbit (rabbit)

Animals, 92.01 Age when offspring are considered animals

Animals, 92.02 Keeping certain animals and fowl prohibited; exceptions

SAN MARINO

Agricultural Waste (compost)

Refuse, 09.02.07 Composting

Bees (bee, hive)

Animals, 06.02.01 Keeping animals in general

Animals, 06.02.03 Beekeeping prohibited

Fish (fish)

Public Health, 10.03.05 Unwholesome food

Fowl (fowl, chickens, roosters, turkey, geese)

Animals, 06.02.01 Keeping animals in general

Ordinance No. O-13-1271 (Amending 06.02.01)

Animals, 06.03.01 Fowl prohibited

Public Health, 10.03.05 Unwholesome food

Miscellaneous, 14.04.06 (E) Special noise sources

Fruit/Vegetable (fruit, vegetable)

Public Health, 10.03.05 Unwholesome food

Garden (garden)

Zoning and Development, 23.05.01 Uses permitted

Goat (goat)

Animals, 06.02.02 Animals prohibited

Heavy Livestock (cattle, goat)

Animals, 06.02.02 Animals prohibited

Horse (horse)

Animals, 06.02.02 Animals prohibited

Nursery (nursery)

Zoning and Development, 23.05.01 Uses permitted

Zoning and Development, 23.10.03 Number of parking spaces required

Pig (pig, hog)

Animals, 06.02.02 Animals prohibited

SANTA CLARITA

Agricultural Waste (green waste, compost)

Solid Waste, 15.44.405 Containers, Bulky Goods, and Green Waste—Placement and Removal

Solid Waste, 15.44.415 Green Waste

Bees (apiary, hive)

Animals, 8.76.020 Signs identifying premises and owner required

Animals, 8.76.030 Signs on hives - Location and description

Zoning, 17.12.030 Listing of Use Type Classifications

Zoning, 17.13.050 Agricultural Use Types

Fish (fish)

Animals, 8.40.015 Sale of live animals—Prohibited at swap meet

Animals, 8.40.015 Sale of Live Animals—Prohibited at Swap Meet

Farm (farm)

Zoning, 17.11.010 Purpose

Zoning, 17.11.020 Zoning designation summary

Zoning, 17.12.030 Listing of Use Type Classifications

Zoning, 17.13.050 Agricultural Use Types

Zoning, 17.18.130 Schedule of Off-Street Parking Requirements

Fowl (fowl, poultry)

Animals, 8.32.040 Livestock and Poultry at Large Deemed Misdemeanor Exceptions

Animals, 8.40.015 Sale of live animals—Prohibited at swap meet

Animals, 8.40.020 Young rabbits or fowl—Certain acts prohibited

Animals, 8.40.030 Young rabbits or fowl—Display, maintenance or sale permitted when

Zoning, 17.17.020 Keeping of Small Animals

Fruit/Vegetable (fruit, vegetable)

Zoning, 17.03.080 Temporary Use Permits

Goat (goat)

Zoning, 17.16.110 Happy Valley Special Standards District

Zoning, 17.17.020 Keeping of Small Animals

Animals, 8.56.020 Importation Permit—Required when - Stockyard and Animal-Care Standards

Heavy Livestock (livestock, cattle, cow, dairies, sheep)

Animals, 8.32.040 Livestock and Poultry at Large Deemed Misdemeanor Exceptions

Animals, 8.32.050 Livestock - Owner liability for service charges

Animals, 8.40.015 Sale of live animals—Prohibited at swap meet

Animals, 8.56.020 Importation Permit—Required when - Stockyard

and Animal-Care Standards

Animals, 8.60.010-080 Tuberculosis control

Zoning, 17.12.030 Listing of Use Type Classifications

Zoning, 17.13.050 Agricultural Use Types

Zoning, 17.16.110 Happy Valley Special Standards District

Zoning, 17.17.010 Keeping of Large Animals

Zoning, 17.17.020 Keeping of Small Animals

Horse (large animals, horse)

Animals, 8.32.040 Livestock and Poultry at Large Deemed Misdemeanor Exceptions

Animals, 8.56.020 Importation Permit—Required when - Stockyard and Animal-Care Standards

Zoning, 17.11.020 Zoning Designation Summary

Zoning, 17.12.030 Listing of Use Type Classifications

Zoning, 17.12.050 Commercial Use Type Classifications

Zoning, 17.13.050 Agricultural Use Types

Zoning, 17.16.080 Placerita Canyon Special Standards District

Zoning, 17.16.110 Happy Valley Special Standards District

Zoning, 17.17.010 Keeping of Large Animals

Zoning, 17.17.020 Keeping of Small Animals

Horticulture (horticulture)

Zoning, 17.12.030 Listing of Use Type Classifications

Zoning, 17.13.050 Agricultural Use Types

Zoning, 17.18.130 Schedule of Off-Street Parking Requirements

Nursery (nursery)

Health and Safety, 9.38.035 Water Conservation Covenants

Zoning, 17.12.030 Listing of Use Type Classifications

Zoning, 17.16.065 MU—Mixed Use Overlay Zone

Zoning, 17.17.090 Oak Tree Preservation

Zoning, 17.18.130 Schedule of Off-Street Parking Requirements

Pig (pig, hog, swine)

Animals, 8.28.061 Keeping and breeding pygmy pigs - Licenses required

Animals, 8.32.040 Livestock and Poultry at Large Deemed Misdemeanor Exceptions

Animals, 8.52.010-040 Stockyards and hog ranches

Animals, 8.56.020 Importation Permit—Required when - Stockyard and Animal-Care Standards

Animals, 8.68.020 Sanitation Requirements Generally

Animals, 8.90.010 Licensing Fees Schedule

Zoning, 17.12.030 Listing of Use Type Classifications

Zoning, 17.13.050 Agricultural Use Types

Zoning, 17.17.010 Keeping of Large Animals

Zoning, 17.17.020 Keeping of Small Animals

Rabbit (rabbit)

Zoning, 17.16.110 Happy Valley Special Standards District

Zoning, 17.17.020 Keeping of Small Animals

Animals, 8.40.015 Sale of live animals—Prohibited at swap meet

Animals, 8.40.020 Young rabbits or fowl—Certain acts prohibited

Animals, 8.40.030 Young rabbits or fowl—Display, maintenance or sale permitted when

SANTA FE SPRINGS

Agricultural Waste (worm)

Zoning 155.038 Conditional Uses

Bees (bee, hive)

Vector Control and Management, 99.03 Apiaries-prohibited

Zoning 155.038 Conditional Uses

Fish (fish)

Swimming Pools, 153.01 Pool enclosures required

Farm (farm)

Zoning, 155.036 Principal permitted uses

Zoning, 155.481 Required parking

Fowl (fowl, poultry)

Animals and Fowl, 92.047 Other animals running at large

Animals and Fowl, 92.102 Artificial treatment

Animals and Fowl, 92.103 Sale of young

Animals and Fowl, 92.104 Sanitary maintenance of animals

Animals and Fowl, 92.110 Noisy animals

Zoning, 155.036 Principal permitted uses

Zoning 155.038 Conditional Uses

Fruit/Vegetable (vegetable, crop, berry)

Zoning, 155.036 Principal permitted uses

Zoning, 155.062 Accessory uses

Zoning, 155.271 Principal permitted uses

Garden (garden)

Zoning, 155.036 Principal permitted uses

Zoning, 155.037 Accessory uses

Zoning, 155.062 Accessory uses

Zoning, 155.092 Accessory uses

Zoning, 155.271 Principal permitted uses

Goat (goat)

Zoning 155.038 Conditional Uses

Animals and Fowl, 92.047 Other animals running at large

Animals and Fowl, 92.104 Sanitary maintenance of animals

Heavy Livestock (cow, sheep, dairies, ox)

Zoning 155.038 Conditional Uses

Zoning, 155.181 Principal permitted uses

Zoning, 155.213 Conditional uses

Zoning, 155.221 Principal permitted uses

Zoning, 155.243 Conditional uses

Zoning, 155.624 Dairies, animal feed lots, and animal sales yards

Animals and Fowl, 92.047 Other animals running at large

Animals and Fowl, 92.104 Sanitary maintenance of animals

Horse (horse)

Zoning 155.037 Accessory Uses

Zoning 155.038 Conditional Uses

Zoning 155.212 Accessory Uses

Zoning, 155.213 Conditional uses

Zoning 155.242 Accessory Uses

Zoning, 155.243 Conditional uses

Animals and Fowl, 92.047 Other animals running at large

Animals and Fowl, 92.104 Sanitary maintenance of animals

Horticulture (flower)

Zoning, 155.036 Principal permitted uses

Zoning, 155.062 Accessory uses

Nursery (nurseries)

Zoning, 155.036 Principal permitted uses

Zoning 155.153 Conditional Uses

Zoning, 155.481 Required parking

Rabbit (rabbit)

Animals and Fowl, 92.047 Other animals running at large

Zoning, 155.036 Principal permitted uses

Zoning 155.038 Conditional Uses

Animals and Fowl, 92.102 Artificial treatment

Animals and Fowl, 92.103 Sale of young

Animals and Fowl, 92.104 Sanitary maintenance of animals

SANTA MONICA

Bees (bee, hive)

Public Welfare, Morals and Policy, 4.04.130 Bees

Fish (fish)

Building Regulations, 8.52.020 Pool water clarity

Fowl (fowl)

Public Welfare, Morals and Policy, 4.04.090 Fowl
Public Welfare, Morals and Policy, 4.04.040 Proper shelter
Public Welfare, Morals and Policy, 4.04.270 Proper care of animals
Public Welfare, Morals and Policy, 4.04.050 Sufficient sustenance

Garden (garden)

Planning and Zoning, 9.04.08.46.020 Permitted uses

Goat (goat)

Public Welfare, Morals and Policy, 4.04.110 Cows or goats
Public Welfare, Morals and Policy, 4.04.100 Hogs, bulls or billy goats
Public Welfare, Morals and Policy, 4.04.120 Staking animals

Heavy Livestock (cow)

Public Welfare, Morals and Policy, 4.04.110 Cows or goats
Public Welfare, Morals and Policy, 4.04.100 Hogs, bulls or billy goats
Public Welfare, Morals and Policy, 4.04.120 Staking animals

Horse (horse)

Public Welfare, Morals and Policy, 4.04.120 Staking animals
Public Welfare, Morals and Policy, 4.04.080 Horses, mules, burros, or jacks

Horticulture (horticulture)

Planning and Zoning, 9.04.20.04.030 Findings

Nursery (nursery)

Planning and Zoning, 9.04.12.170 Commercial nurseries in the TP District

Planning and Zoning, 9.04.10.08.040 Number of parking spaces required

Planning and Zoning, 9.04.08.37.030 Uses subject to performance standards permit

Planning and Zoning, 9.04.08.14.020 Permitted uses

Planning and Zoning, 9.04.08.28.020 Permitted uses

Planning and Zoning, 9.04.08.16.020 Permitted uses

Pigs (hog)

Public Welfare, Morals and Policy, 4.04.100 Hogs, bulls or billy goats

SIERRA MADRE

Agricultural Waste (green waste, compost)

Health and Safety, 8.12.040 - Commercial and industrial exclusion

Health and Safety, 8.12.045 - Commercial and industrial exclusion

Bee (bee, hive)

Animals, 6.08.040 - Bees

Health and Safety, 8.28.090 - Apiaries.

Fowl (fowl, poultry, chicken, goose, turkey)

Business Licenses and Regulations, 5.08.160 - Peddlers or solicitors—Exemptions

Animals, 6.08.010 - Poultry and rabbits

Animals, 6.08.050 - Noisy animals

Zoning, 17.40.010 - Permitted uses

Fruit/Vegetable (crop)

Zoning, 17.16.020 - Permitted uses

Zoning, 17.20.020 - Permitted uses

Zoning, 17.60.030 - Conditional use permits—When required

Garden (garden)

Zoning, 17.38.030 - Conditional use permit required

Goat (goat)

Animals, 6.08.020 - Cattle, horses, goats, mules and burros

Heavy Livestock (livestock, cattle)

Animals, 6.08.020 - Cattle, horses, goats, mules and burros

Zoning, 17.52.070 - Land use regulations

Zoning, 17.60.030 - Conditional use permits—When required

Horse (horse)

Animals, 6.04.070 - Licensing fees

Animals, 6.08.020 - Cattle, horses, goats, mules and burros

Horticulture (horticulture, flower)

Business Licenses and Regulations, 5.08.130 - Nurseries

Nursery (nursery)

Business Licenses and Regulations, 5.08.130 - Nurseries

Zoning, 17.16.020 - Permitted uses

Zoning, 17.20.020 - Permitted uses

Zoning, 17.36.020 - Permitted uses and uses permitted by conditional use permit

Zoning, 17.60.030 - Conditional use permits—When required

Zoning, 17.68.020 - Parking spaces required

Pig (hog)

Animals, 6.08.030 - Hogs

Rabbit (rabbit)

Animals, 6.08.010 - Poultry and rabbits

Zoning, 17.40.010 - Permitted uses

SIGNAL HILL

Agricultural Waste (green waste, compost)

Health and Safety, 8.08.050 Obligations of residential occupants and property owners

Bees (bee, apiary)

Health and Safety, 8.25.030 Apiaries - Prohibited

Public Peace, Morals, and Welfare, 9.04.030 Beekeeping and hog raising deemed misdemeanors

Fowl (fowl)

Public Peace, Morals, and Welfare, 9.16.040 Prohibited noises enumerated

Trailer Parks, 17.16.320 Animals

Fruit/Vegetable (fruit, vegetable)

Zoning, 20.16.020 Permitted uses

Zoning, 20.20.020 Use classification

Zoning, 20.30.030 Use classification

Zoning, 20.40.040 Use classification

Zoning, 20.49.030 Use classification

Garden (garden)

Public Utilities, 13.10.020 Applicability

Zoning, 20.16.020 Permitted uses

Zoning, 20.18.020 Use classification

Zoning, 20.20.020 Use classification

Heavy Livestock (livestock)

Zoning, 20.04.285 Feedlot or feed yard

Horse (horse)

Business Taxes, Licenses and Regulations, 5.04.560 Stables and riding academies

Horticulture (horticulture, flower)

Streets, Sidewalks and Public Places, 12.16.110 Pollutant source reduction

Zoning, 20.16.020 Permitted uses

Zoning, 20.20.020 Use classification

Zoning, 20.30.030 Use classification

Zoning, 20.40.040 Use classification

Zoning, 20.49.030 Use classification

Nursery (nursery)

Zoning, 20.30.030 Use classification

Zoning, 20.40.040 Use classification

Pig (hog)

Public Peace, Morals, and Welfare, 9.04.030 Beekeeping and hog raising deemed misdemeanors

Rabbit (rabbit)

Animals, 6.04.060 Number of animals (household pets)

SOUTH EL MONTE

Fowl (chicken)

Zoning, 17.08.060. Prohibited uses

Zoning, 17.10.060. Prohibited uses

Zoning, 17.12.060. Prohibited uses

Fruit/Vegetable (vegetable)

Zoning, 17.10.030. Principal Permitted Uses

Zoning, 17.08.030. Principal Permitted Uses

Zoning, 17.12.030. Principal Permitted Uses

Garden (garden)

Zoning, 17.08.030. Principal Permitted Uses

Zoning, 17.10.030. Principal Permitted Uses

Zoning, 17.12.030. Principal Permitted Uses

Horse (stables)

Zoning, 17.08.060. Prohibited uses

Zoning, 17.10.060. Prohibited uses

Zoning, 17.12.060. Prohibited uses

Horticulture (flower)

Zoning, 17.08.030. Principal Permitted Uses

Zoning, 17.10.030. Principal Permitted Uses

Zoning, 17.12.030. Principal Permitted Uses

SOUTH GATE

Agricultural Waste (green waste)

Franchises, 13.100.170 Residential householder exclusion

Bees (bee, apiary)

Animals, 4.01.070 Apiaries

Farm (farm)

Zoning, 11.26.010 Unclassified uses designated—Review and permit

Fowl (fowl, poultry, rooster)

Animals, 4.01.080 Roosters

Animals, 4.01.040 Animal care—General requirements

Animals, 4.01.130 Wild animal licenses for animal establishments

Animals, 4.01.170 Animals running at large

Health and Sanitation, 6.12.020 Premises used for grain or animal food storage

Health and Sanitation, 6.40 Slaughter of Rabbits and Poultry

Public Safety and Morals, Zoning, 11.28.010 Prohibited uses designated—Reasons for exclusion

Zoning, 11.28.010 Prohibited uses designated—Reasons for exclusion

Garden (garden)

Zoning, 11.29.160 Maximum permissible sound levels by receiving land use

Goat (goat)

Animals, 4.01.130 Wild animal licenses for animal establishments

Animals, 4.01.170 Animals running at large

Heavy Livestock (cattle, cow, dairy, sheep, ox)

Animals, 4.01.130 Wild animal licenses for animal establishments

Animals, 4.01.170 Animals running at large

Animals, 4.01.200 Importing of animals

Animals, 4.03.040 Sanitation requirements generally

Horse (horse)

Animals, 4.01.130 Wild animal licenses for animal establishments

Animals, 4.01.170 Animals running at large

Animals, 4.03.040 Sanitation requirements generally

Public Safety and Morals, Zoning, 11.28.010 Prohibited uses designated—Reasons for exclusion

Horticulture (horticulture, flower)

Zoning, 11.07.010 Permitted uses

Zoning, 11.08.010 Permitted uses

Zoning, 11.17.010 Permitted uses

Zoning, 11.18.010 Permitted uses

Zoning, 11.20.010 Permitted uses

Zoning, 11.22.010 Permitted uses

Zoning, 11.24.010 Permitted uses

Nursery (nursery)

Zoning, 11.07.010 Permitted uses

Zoning, 11.08.010 Permitted uses

Zoning, 11.17.010 Permitted uses

Zoning, 11.18.010 Permitted uses

Zoning, 11.22.010 Permitted uses

Zoning, 11.24.010 Permitted uses

Pig (pig, hog)

Animals, 4.01.130 Wild animal licenses for animal establishments

Animals, 4.01.170 Animals running at large

Animals, 4.03.040 Sanitation requirements generally

Zoning, 11.28.010 Prohibited uses designated—Reasons for exclusion

Rabbit (rabbit)

Animals, 4.01.040 Animal care—General requirements

Animals, 4.01.130 Wild animal licenses for animal establishments

Animals, 4.01.170 Animals running at large

Health and Sanitation, 6.40 Slaughter of Rabbits and Poultry

Public Safety and Morals, Zoning, 11.28.010 Prohibited uses designated—Reasons for exclusion

Zoning, 11.28.010 Prohibited uses designated—Reasons for exclusion

SOUTH PASADENA

Bees (bee, hive)

Animals and Fowl, 5.18 Bees-Keeping near swimming pool

Zoning, 36.350.230 Community gardens

Fowl (fowl, poultry, chicken, turkeys, geese, rooster)

Animals and Fowl, 5.2 Fowl and rabbits—Maximum number of pigeons or doves permitted to be kept; application and granting of variance by planning commission

Animals and Fowl, 5.4 Same—Restrictions on running at large and keeping near adjoining property and dwelling

Animals and Fowl, 5.4-1 Same—Number of chickens or fowl which may be kept

Animals and Fowl, 5.5 Same—Certain fowl prohibited

Animals and Fowl, 5.21 Filthy stables and yards; manure

Animals and Fowl, 5.22-1 Mistreating baby fowl or rabbits

Noise Regulation, 19A.11 Animals and fowl

Zoning, 36.350.230 Community gardens

Fruit/Vegetable (fruit, vegetable)

Zoning, 36.350.230 Community gardens

Garden (garden)

Garbage and Waste, 16.14 Piling of brush, tree, etc. trimmings and stumps

Zoning, 36.220.030 Residential Zoning District Land Uses and Permit Requirements

Zoning, 36.230.030 Commercial District Land Uses and Permit Requirements

Zoning, 36.240.030 Special Purpose District Land Uses and Permit Requirements

Zoning, 36.350.230 Community gardens

Goat (goat)

Animal and Fowl, 5.15 Keeping goats

Animal and Fowl, 5.23 Running at large prohibited

Heavy Livestock (cattle, cow, sheep, ox)

Animal and Fowl, 5.13 Keeping sheep

Animal and Fowl, 5.14 Keeping cattle

Animals and Fowl, 5.21 Filthy stables and yards; manure

Animal and Fowl, 5.23 Running at large prohibited

Horse (horse)

Animals and Fowl, 5.21 Filthy stables and yards; manure

Animals and Fowl, 5.23 Running at large prohibited

Animals and Fowl, 5.7 Same—Keeping within fifty feet of adjoining property line or one hundred feet of dwelling of another

Horticulture (flower)

Zoning, 36.350.230 Community gardens

Nursery (nurseries)

Zoning, 36.230.030 Commercial District Land Uses and Permit Requirements

Zoning, 36.410.030 Home Occupation Permits

Pig (hog, swine)

Animal and Fowl, 5.16 Keeping swine

Animal and Fowl, 5.23 Running at large prohibited

Rabbit (rabbit)

Animals and Fowl, 5.4 Same—Restrictions on running at large and keeping near adjoining property and dwelling

Animals and Fowl, 5.4-1 Same—Number of chickens or fowl which may be kept

Animals and Fowl, 5.21 Filthy stables and yards; manure

Animals and Fowl, 5.22-1 Mistreating baby fowl or rabbits

TEMPLE CITY

Fowl (fowl, poultry, rooster)

Public Safety, 3661: Animals: Duty to confine

Business Licenses and Regulations, 5140: Definitions

Zoning Regulations, 9331: Permitted uses

Zoning Regulations, 9350: Permitted uses

Zoning Regulations, 9360: Permitted uses

Heavy Livestock (livestock, cow, sheep, ox)

Public Safety, 3661: Animals: Duty to confine

Business Licenses and Regulations, 5140: Definitions

Zoning Regulations, 9202: Conditional use permits, when required

Horse (horse)

Public Safety, 3661: Animals: Duty to confine

Horticulture (horticulture)

Zoning Regulations, 9431: Uses permitted

Nursery (nurseries)

Zoning Regulations, 9291: Parking spaces required

Zoning Regulations, 9371: Uses permitted

Zoning Regulations, 9380: Permitted uses

Zoning Regulations, 9431: Uses permitted

Pig (pig, hog)

Public Safety, 3661: Animals: Duty to confine

Business Licenses and Regulations, 5140: Definitions

Zoning Regulations, 9202: Conditional use permits, when required

Rabbit (rabbit)

Public Safety, 3690.2: Novelty pets

Business Licenses and Regulations, 5140: Definitions

Zoning Regulations, 9331: Permitted uses

Zoning Regulations, 9350: Permitted uses

Zoning Regulations, 9360: Permitted uses

TORRANCE

Agricultural Waste (compost)

Public Health and Welfare, 43.1.11 Scavenging prohibited

Public Health and Welfare, 43.7.11 Waste diversion, recycling and graffiti

Bees (bee, hive)

Public Health and Welfare, 41.10.1 Keeping of bees

Farm (farm)

Land use, 91.30.1 Permissible uses

Licensing, 33.18.15 Exhibitions, show

Fowl (fowl, poultry, egg)

Public Health and Welfare, 42.2 Inspection of poultry slaughtered, dissected or dismembered in city

Public Health and Welfare, 41.6 Regulating sale of animals

Public Health and Welfare, 41.11.1 Requirements for special permits for

animals

Public Health and Welfare, 42.1.4 Permit required for certain businesses or occupations

Public Health and Welfare, 46.2.5 Animals and fowl

Licensing, 33.18.32 Egg route

Land Use, 91.30.1 Permitted uses

Fruit/Vegetable (vegetable, crop, berry)

Land Use, 91.4.1 Permissible uses

Land Use, 91.15.1 Permissible uses

Garden (garden)

Land Use, 91.4.1 Permissible uses

Land Use, 91.15.1 Permissible uses

Goat (goat)

Public Health and Welfare, 42.1.13 Requirements as to sale and distribution of milk, cream and dairy products

Land Use, 91.30.1 Permissible uses

Heavy Livestock (livestock, cow, dairy)

Public Health and Welfare, 41.7.1 Maintenance of bovine animals prohibited

Public Health and Welfare, 41.1.8,9 Tethering Prohibited

Public Health and Welfare, 42.1.13 Requirements as to sale and distribution of milk, cream and dairy products

Public Health and Welfare, 42.1.4 Permit required for certain businesses or occupations

Land Use, 91.2.22 Dairy

Land Use, 91.30.1 Permissible uses

Horse (horse)

Public Health and Welfare, 41.1.8,9 Tethering Prohibited

Land Use, 91.2.58 Stable, Private

Land Use, 91.2.59 Stable, Public

Land Use, 91.15.1 Permissible uses

Horticulture (flower)

Land Use, 91.4.1 Permissible uses

Land Use, 91.15.1 Permissible uses

Land Use, 91.20.1 Permissible uses

Nursery (nurseries)

Land Use, 91.20.1 Permissible uses

Land Use, 93.2.39 Plant nurseries

Pig (pig, hog, swine)

Public Health and Welfare, 41.5.1 Prohibited

Rabbit (rabbit)

Public Health and Welfare, 41.6 Regulating sale of animals

Land Use, 91.30.1 Permissible uses

VERNON

Agricultural Waste

Chapter 12. Waste Management and Recycling. 12.36 (e,j)

Fowl

Chapter 10. Animal and Vector Control. 10.34

Chapter 11. Food Protection Program. 11.8.2-4

Fruit/Vegetable

Chapter 5. Business License Taxes. 5.22 (12)

Garden

Chapter 7. Fire Regulations. Appx K101.3 (1e)

Goat

Chapter 10. Animal and Vector Control. 10.34,36

Chapter 10. Animal and Vector Control. 10.79

Rabbit

Chapter 10. Animal and Vector Control. 10.34

Heavy Livestock

Chapter 10. Animal and Vector Control. 10.34,36

Chapter 10. Animal and Vector Control. 10.79

Horse

Chapter 10. Animal and Vector Control. 10.36

Chapter 10. Animal and Vector Control. 10.79

Nursery

Chapter 25. Water. 25.104 (f)

Chapter 25. Water. 25.105 (c)

Pig

Chapter 10. Animal and Vector Control. 10.34

Chapter 10. Animal and Vector Control. 10.79

WALNUT

Agricultural Waste (green waste)

Public Health, Safety and Welfare, 15A-26 Containers—Required; specifications

Public Health, Safety and Welfare, 15A-41 Provisions of recycling containers

Public Health, Safety and Welfare, 15A-42 Separation of recyclable materials

Fowl (fowl, poultry, chickens, rooster, goose)

Public Health, Safety and Welfare, 16B-3 Certain noise prohibited

Planning and Zoning, 25-38 Accessory uses permitted

Planning and Zoning, 25-45 Animals permitted as an accessory use

Fruit/Vegetable (crop, berry)

Planning and Zoning, 25-37 Principal uses permitted

Planning and Zoning, 25-150 Permitted uses

Planning and Zoning, 25-162 Permitted uses

Garden (garden)

Public Health, Safety and Welfare, 15A-28 Same - Tree trimmings, etc

Public Health, Safety and Welfare, 15A-41 Provisions of recycling containers

Goat (goat)

Planning and Zoning, 25-37 Principal uses permitted

Planning and Zoning, 25-38 Accessory uses permitted

Planning and Zoning, 25-45 Animals permitted as an accessory use

Planning and Zoning, 25-46 Prohibition

Planning and Zoning, 25-162 Permitted uses

Heavy Livestock (cattle, sheep)

Planning and Zoning, 25-37 Principal uses permitted

Planning and Zoning, 25-38 Accessory uses permitted

Planning and Zoning, 25-45 Animals permitted as an accessory use

Planning and Zoning, 25-46 Prohibition

Planning and Zoning, 25-162 Permitted uses

Horse (horse)

Planning and Zoning, 25-37 Principal uses permitted

Planning and Zoning, 25-38 Accessory uses permitted

Planning and Zoning, 25-45 Animals permitted as an accessory use

Planning and Zoning, 25-46 Prohibition

Planning and Zoning, 25-162 Permitted uses

Horticulture (ornamental)

Planning and Zoning, 25-178.10 Standards for performance of permitted work

Nursery (nursery)

Planning and Zoning, 25-127 Additional uses by conditional use permit

Planning and Zoning, 25-150 Permitted uses

Planning and Zoning, 25-162 Permitted uses

Planning and Zoning, 25-201 Schedule of minimum requirements

Pig (pig, swine)

Planning and Zoning, 25-46 Prohibition

Rabbit (rabbit)

Planning and Zoning, 25-38 Accessory uses permitted

Planning and Zoning, 25-45 Animals permitted as an accessory use

WEST COVINA

Agricultural Waste (compost)

Zoning, 26-391 Permitted uses

Bee (bee)

Animals and Fowl, 6-2 Keeping of certain animals prohibited

Fowl (fowl, poultry, hen)

Animals and Fowl, 6-4 Safe keeping of animals

Animals and Fowl, 6-27 Animal nuisances

Zoning, 26-391 Permitted uses

Zoning, 26-599 Industrial and manufacturing type uses

Fruit/Vegetable (crop)

Zoning, 26-391 Permitted uses

Goat (goat)

Animals and Fowl, 6-4 Safe keeping of animals

Zoning, 26-391 Permitted uses

Heavy Livestock (cow, sheep, ox)

Animals and Fowl, 6-4 Safe keeping of animals

Zoning, 26-391 Permitted uses

Horse (horse)

Animals and Fowl, 6-4 Safe keeping of animals

Zoning, 26-391 Permitted uses

Zoning, 26-405.5 Special requirements for yard and setbacks

Zoning, 26-673 Permitted uses

Horticulture (horticulture)

Zoning, 26-391 Permitted uses

Nursery (nursery)

Zoning, 26-582 Parking ratios, nonresidential (except PAR)

Zoning, 26-597 Service, trade, cultural, public and private uses

Zoning, 26-749 Permitted uses

Pig (pig, hog, swine)

Animals and Fowl, 6-2 Keeping of certain animals prohibited

Animals and Fowl, 6-4 Safe keeping of animals

Animals and Fowl, 6-36- 45 Licenses

Zoning, 26-391 Permitted uses

Zoning, 26-685.1000-1600 Miniature pot-bellied pigs

Rabbit (rabbit)

Animals and Fowl, 6-4 Safe keeping of animals

Zoning, 26-391 Permitted uses

WEST HOLLYWOOD

Garden (garden)

Vehicles and Traffic, 10.08.160 West Hollywood preferential parking district No.1

Zoning, G-12.030 Site organization and orientation

Zoning, 19.06.030 Residential Zoning District Land Uses and Permit Requirements

Zoning, 19.10.030 Commercial and Public District Land Uses and Permit Requirements

Zoning, 19.36.110 Congregate Care and Senior Residential Projects

Nursery (nurseries)

Environmental Protection, Pollution and Solid Waste, 15.52.010 Regulation of irrigation practices

Zoning, 19.10.030 Commercial and Public District Land Uses and Permit Requirements

Zoning, 19.28.040 Number of Parking Spaces Required

WESTLAKE VILLAGE

Bee (bee, apiary, hive)

Zoning, 9.23.030 Animals Subject to Director's Review

Fowl (fowl, chicken, turkey, geese)

Zoning, 9.23.030 Animals Subject to Director's Review

Goat (goat)

Zoning, 9.23.040 Prohibited animals

Heavy Livestock (livestock, cows, sheep)

Zoning, 9.23.040 Prohibited animals

Horse (horse)

Zoning, 9.9.030 Conditionally Permitted Uses

Zoning, 9.23.030 Animals Subject to Director's Review

Nursery (nursery)

Zoning, 9.8.030 Conditionally Permitted Uses

Zoning, 9.8.040 Outdoor storage

Pig (pig, hog)

Zoning, 9.23.040 Prohibited animals

WHITTIER

Agricultural Waste (green waste)

Zoning, 18.10.020 Accessory uses

Bee (bee, hive)

Health and Safety, 8.20.010 Prohibited

Fish (fish)

Zoning, 18.52.030 Required for designated uses

Fowl (fowl)

Zoning, 18.34.020 - Permitted uses

Zoning, 18.52.030 Required for designated uses

Fruit/Vegetable (crop, berry)

Zoning, 18.52.030 Required for designated uses

Heavy Livestock (livestock)

Revenue and Finance, 3.36.330 District boundaries—Inclusion of lands devoted to agricultural, timber or livestock uses

Zoning, 18.52.030 Required for designated uses

Horse (horse)

Zoning, 18.46 Equestrian uses

Horticulture (horticulture)

Zoning, 18.24.020 - Permitted uses

Zoning, 18.30.020 - Permitted uses

Nursery (nursery)

Zoning, 18.24.020 - Permitted uses

Zoning, 18.28.020 - Permitted uses

Zoning, 18.30.020 - Permitted uses

Zoning, 18.52.030 Required for designated uses

Rabbit (rabbit)

Zoning, 18.34.020 - Permitted uses

A: CHART OF INVENTORY RESOURCES

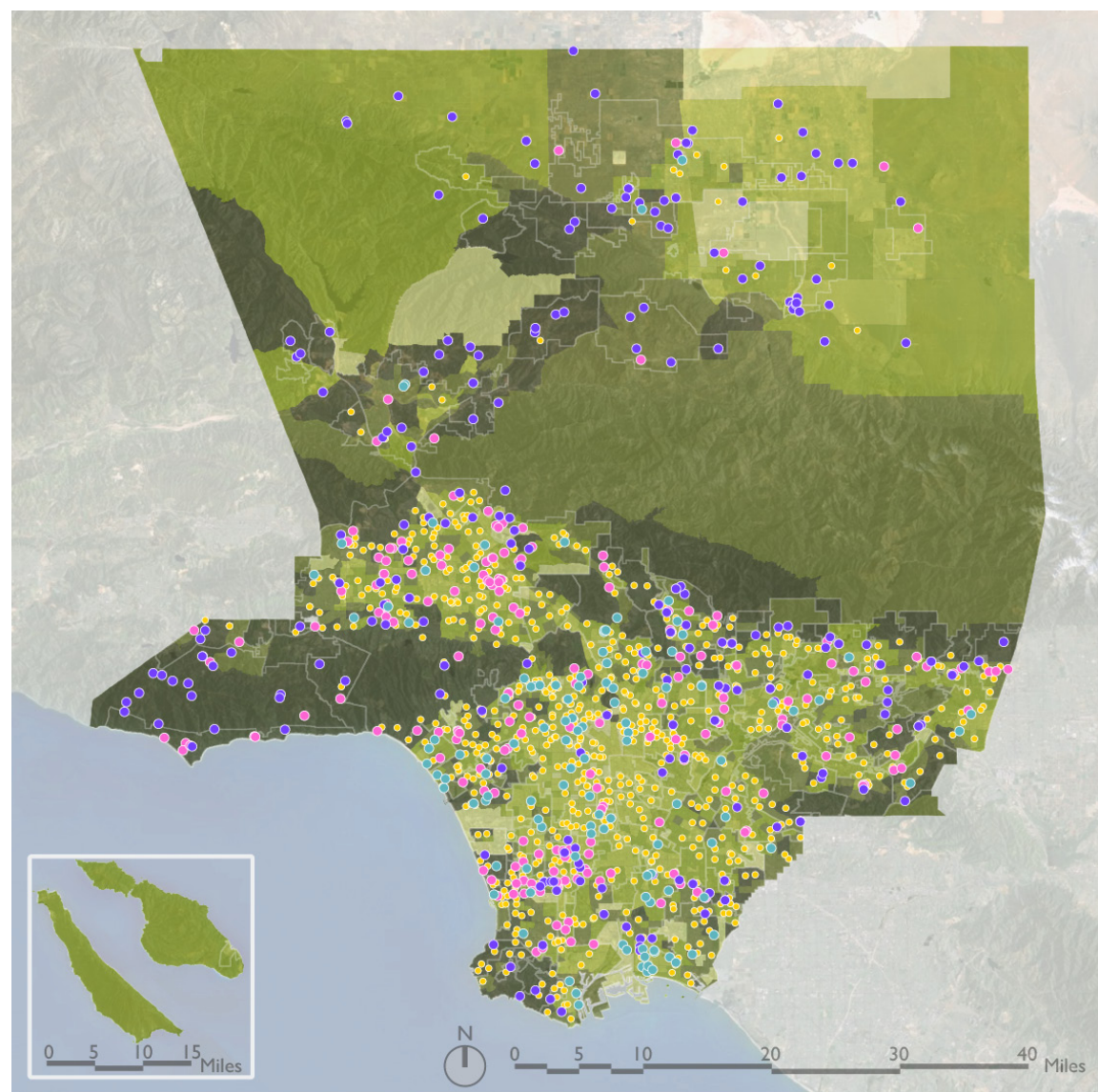
Typology	Primary Source	Additional Sources
Community Gardens	Los Angeles Neighborhood Land Trust "A Guide to Los Angeles' Community Gardens" (2012) www.gardens.lanlt.org	Green Towns www.greentowns.com American Community Garden Association www.acga.localharvest.org Searches on social media sites such as Yelp, Facebook, and Foursquare.
School Gardens	Los Angeles County Office of Education Public Schools Directory (2010)	No additional sources
Nurseries	California Department of Agriculture List of Licensed Nurseries www.plant.cdfa.ca.gov/nursery	www.nurserytrees.com
Farms	LexisNexis SIC Codes: 0111-1070 and 0180-0191	California Agricultural Almanac Farm List www.calagalmanac.com/farms/list Pick Your Own www.pickyourown.com Real Time Farms www.realtimefarms.com California Farm Bureau Federation www.cfbf.com California Avocado Map of Featured Avocado Growers www.californiaavocado.com/grower-map

CHART OF INVENTORY RESOURCES *(continued)*

Typology	Primary Source	Additional Sources
Orchards	LexisNexis SIC Codes 0171-0179	No Additional Source
Vineyards	<p>Crazy About Wine Winery Directory- Los Angeles, Orange & Riverside County Wineries (2013) www.crazyaboutwine.com</p> <p>Wine-Searcher.com Los Angeles County Wineries, (2013) www.wine-searcher.com</p>	<p>USA Today Wineries in a 50-mile Radius of Los Angeles www.traveltips.usatoday.com/wineries-50mile-radius-los-angeles-61365.html</p> <p>California Wineries Guide www.wineclub.usa.com</p> <p>Local Wine Events Food and Wine Resources: All Wineries and Vineyards www.localwineevents.com</p> <p>Discover California Wines Wine Map and Winery Directory www.discovercaliforniawines.com/discover-california/wine-map-winery-directory/</p> <p>Cheers 2 Wine Los Angeles Wineries www.cheers2wine.com/Los-Angeles-Wineries.html</p> <p>Winey Malibu www.winerymalibu.com</p>

B: MAPS

MEDIAN HOUSEHOLD INCOME AND URBAN AGRICULTURE



LEGEND

Urban Agriculture Sites

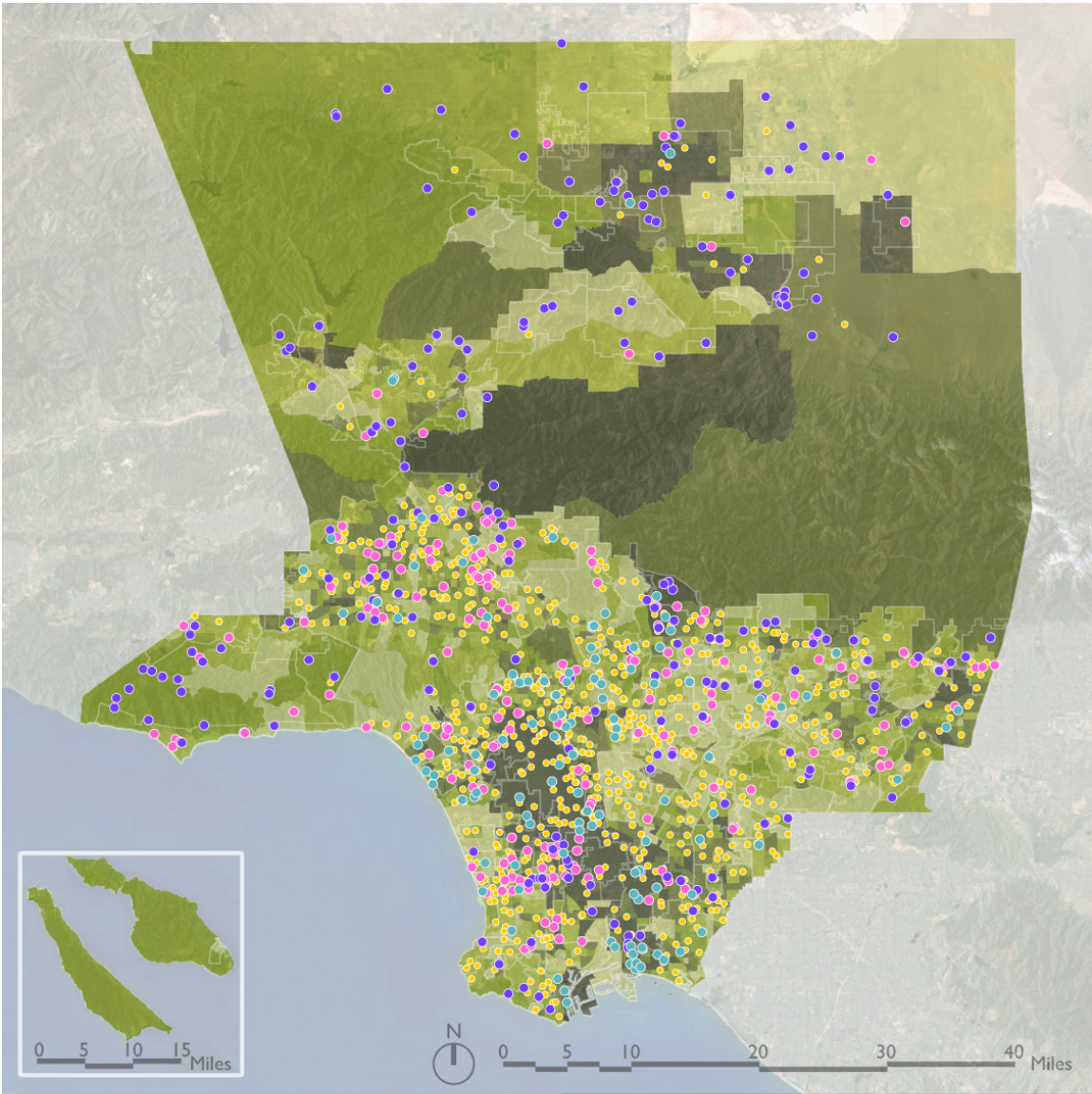
- Community Garden
- Farm
- Nursery
- School Garden

Median Household Income (in 2010 Dollars)

- Less than \$23,550
- \$23,550 - \$47,100
- \$47,100 - \$70,650
- \$70,650 - \$94,200
- Over \$94,200

Base map source: Esri; data collected by researchers—see Part A: Chart of Resources in this Appendix for detailed sources.

AFRICAN AMERICAN POPULATIONS AND URBAN AGRICULTURE



LEGEND

Urban Agriculture Sites

● Community Garden

● Farm

● Nursery

● School Garden

Percent Black or African American Population

Less than 0.5%

0.5% - 2.5%

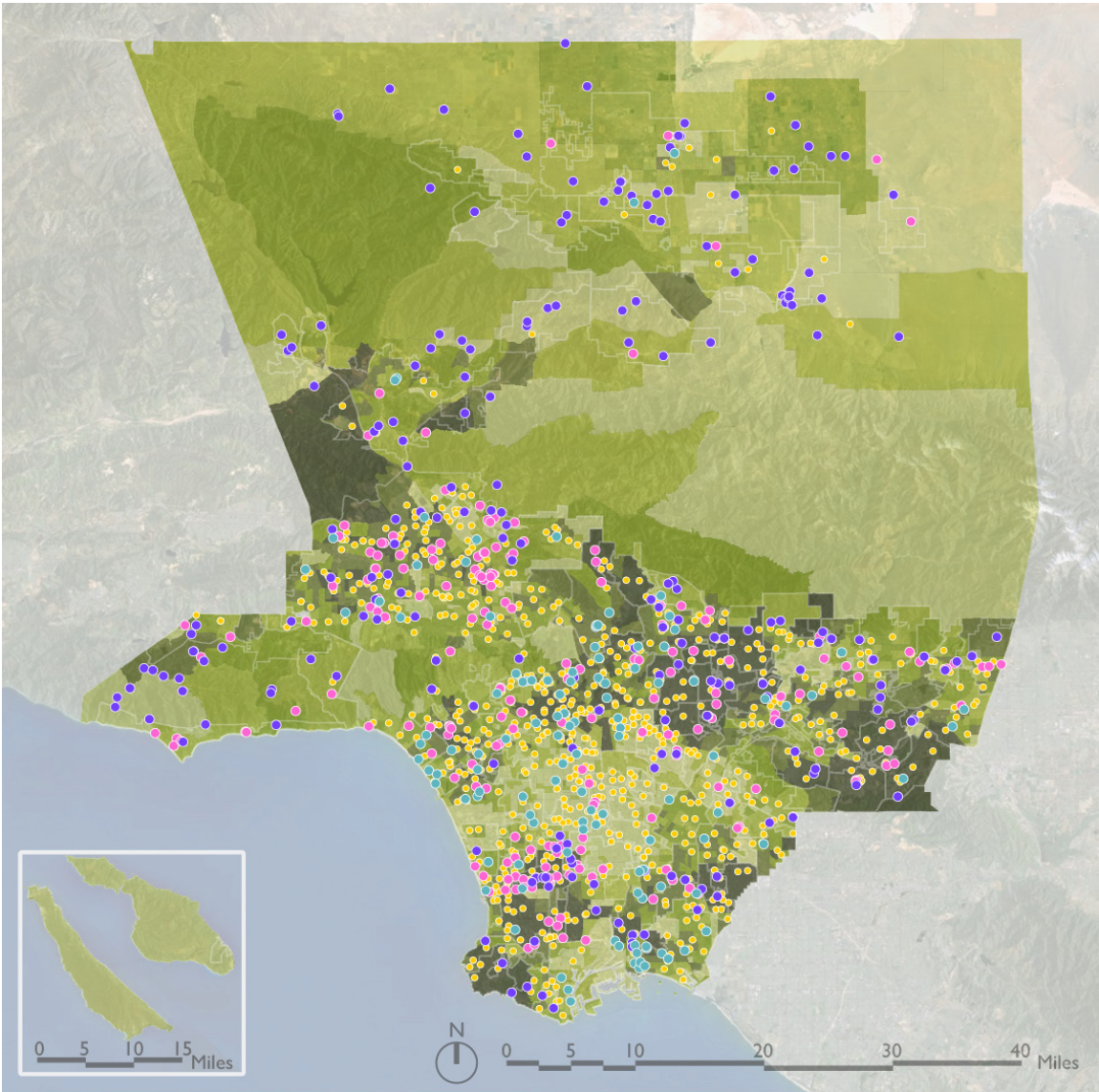
2.5% - 5.0%

5.0% - 12.0%

Over 12.0%

Base map source: Esri; data collected by researchers—see Part A: Chart of Resources in this Appendix for detailed sources.

ASIAN POPULATION AND URBAN AGRICULTURE



LEGEND

Urban Agriculture Sites

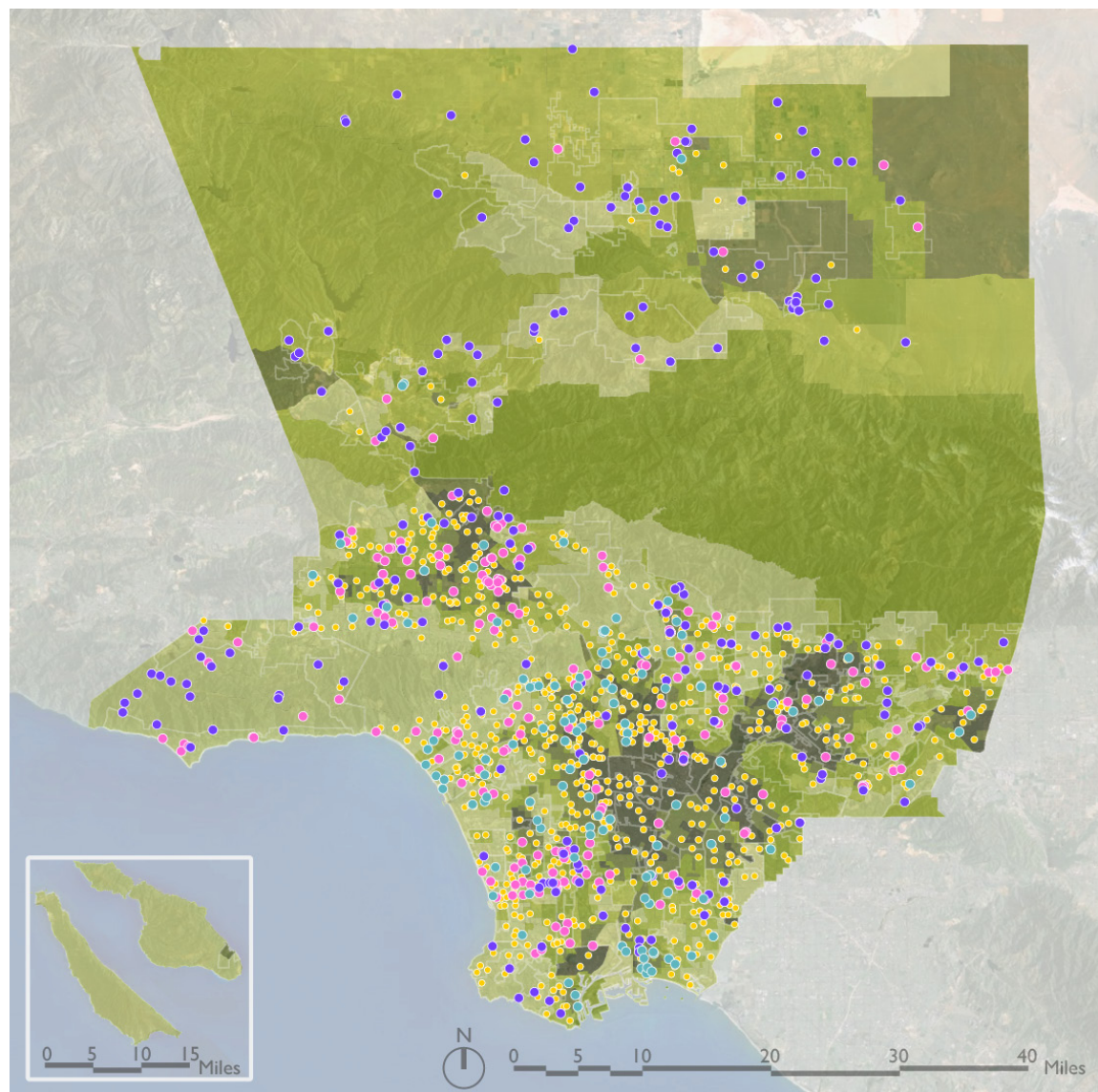
- Community Garden
- Farm
- Nursery
- School Garden

Percent Asian Population

- Less than 1.5%
- 1.5% - 6.0%
- 6.0% - 11.5%
- 11.5% - 20.5%
- Over 20.5%

Base map source: Esri; data collected by researchers—see Part A: Chart of Resources in this Appendix for detailed sources.

HISPANIC/LATINO POPULATION AND URBAN AGRICULTURE



LEGEND

Urban Agriculture Sites

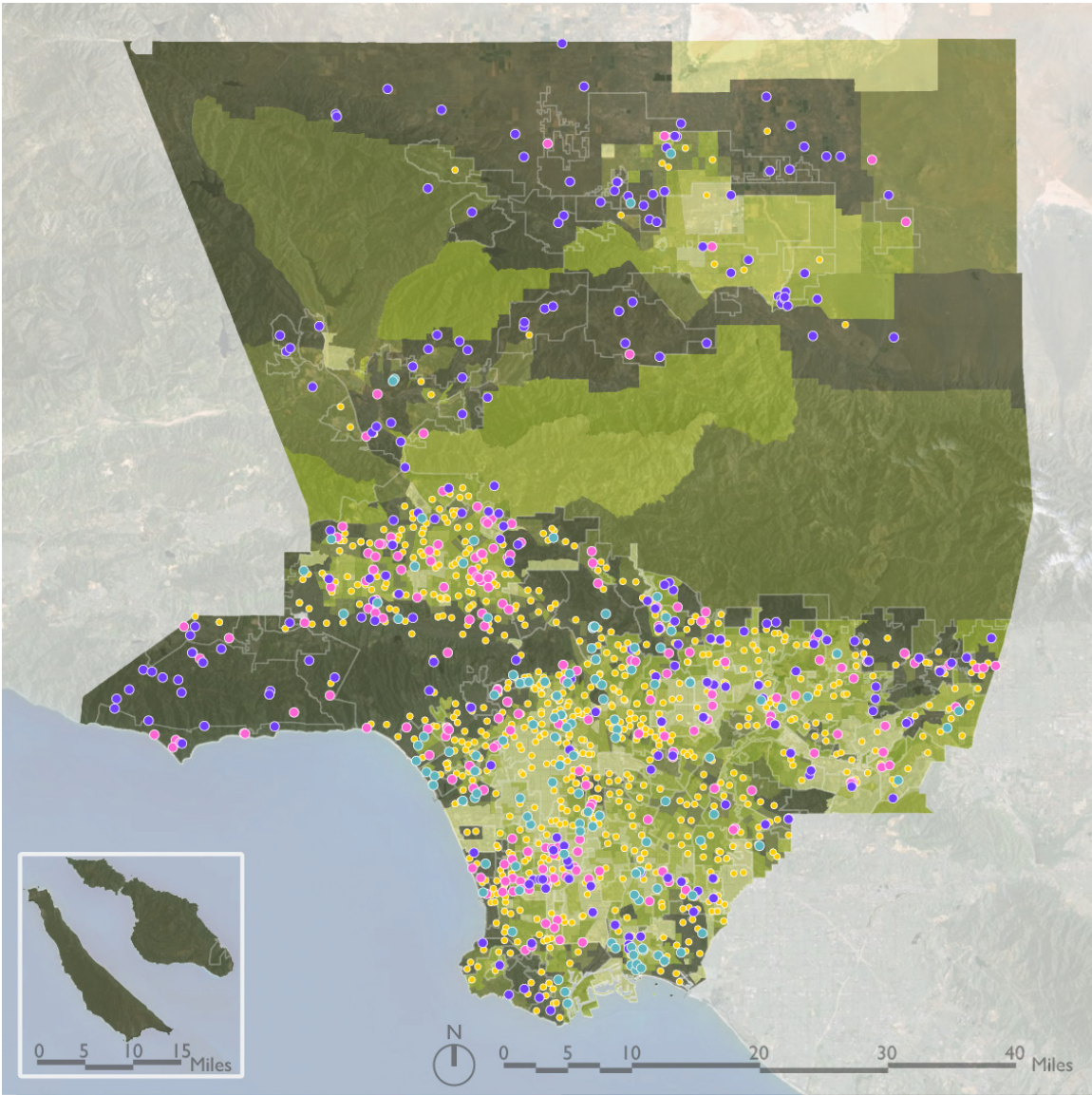
- Community Garden
- Farm
- Nursery
- School Garden

Percent Hispanic or Latino Population

- Less than 15.0%
- 15.0% - 32.0%
- 32.0% - 56.0%
- 56.0% - 78.0%
- Over 78.0%

Base map source: Esri; data collected by researchers—see Part A: Chart of Resources in this Appendix for detailed sources.

WHITE POPULATION AND URBAN AGRICULTURE



LEGEND

Urban Agriculture Sites

- Community Garden
- Farm
- Nursery
- School Garden

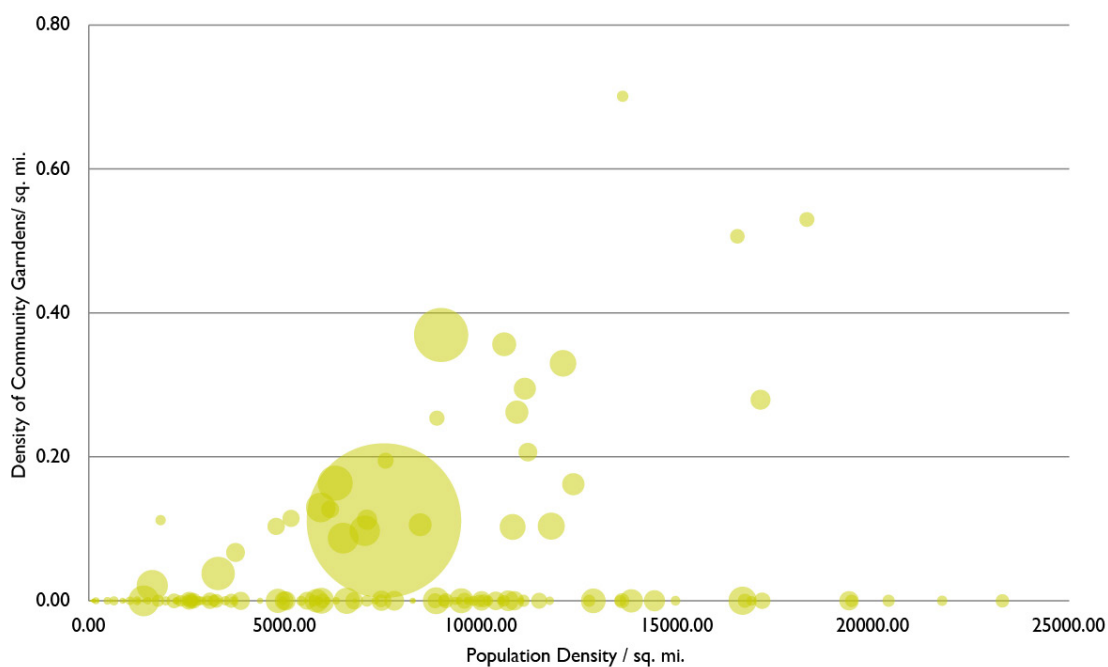
Percent White Population

- Less than 30.0%
- 30.0% - 45.0%
- 45.0% - 60.0%
- 60.0% - 70.0%
- Over 70.0%

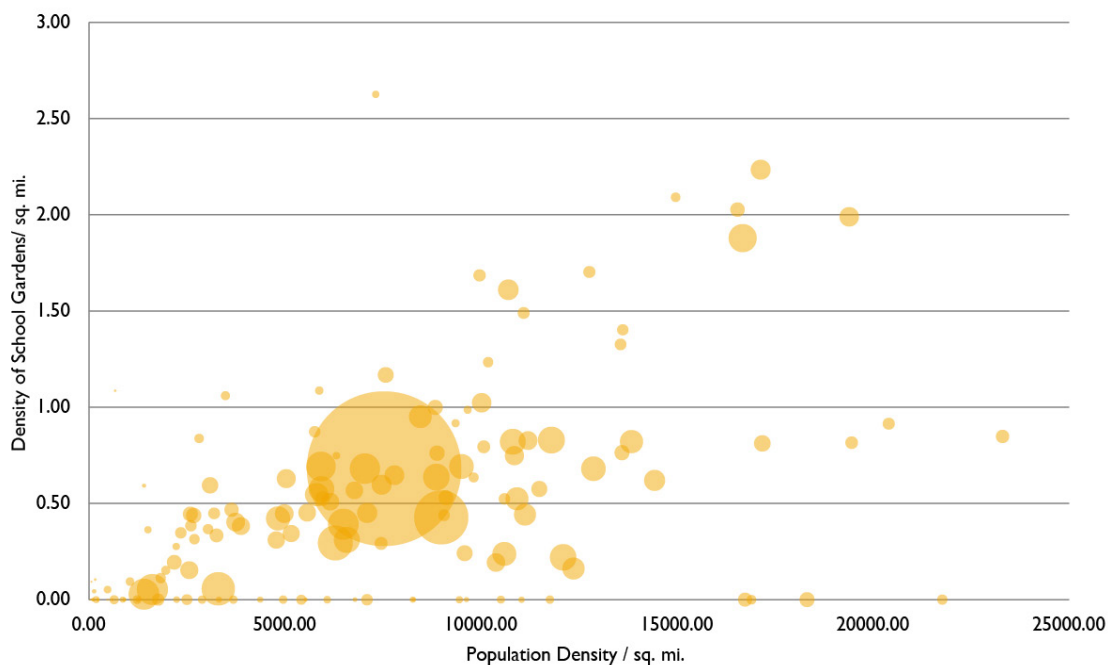
Base map source: Esri; data collected by researchers—see Part A: Chart of Resources in this Appendix for detailed sources.

C:TRENDS

COMMUNITY GARDENS AND POPULATION DENSITY

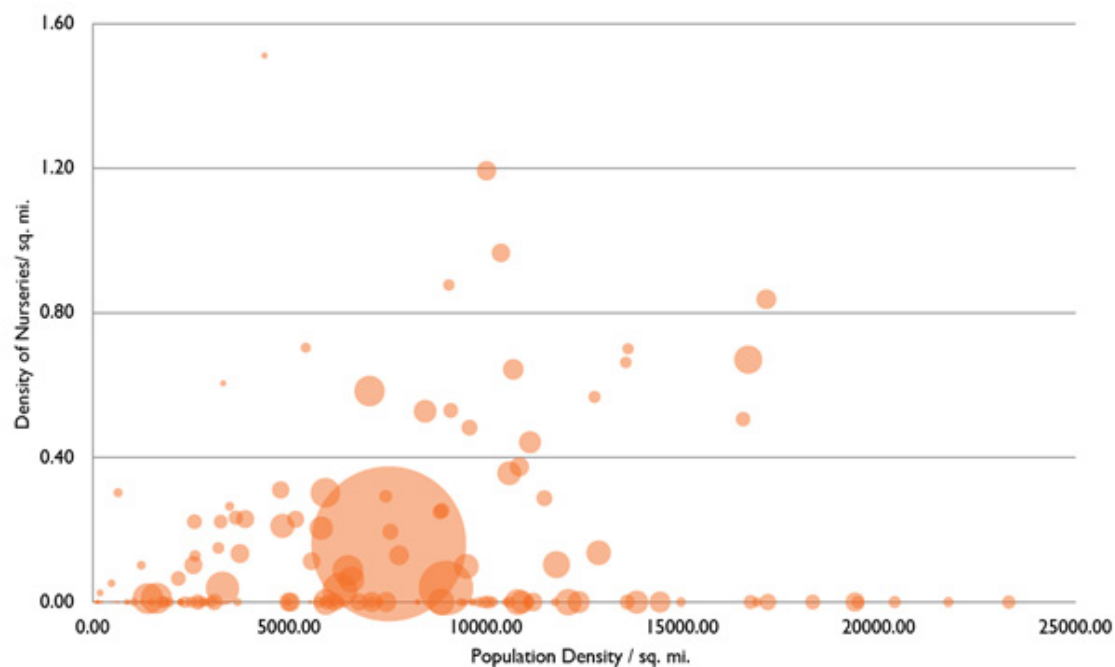


SCHOOL GARDENS AND POPULATION DENSITY

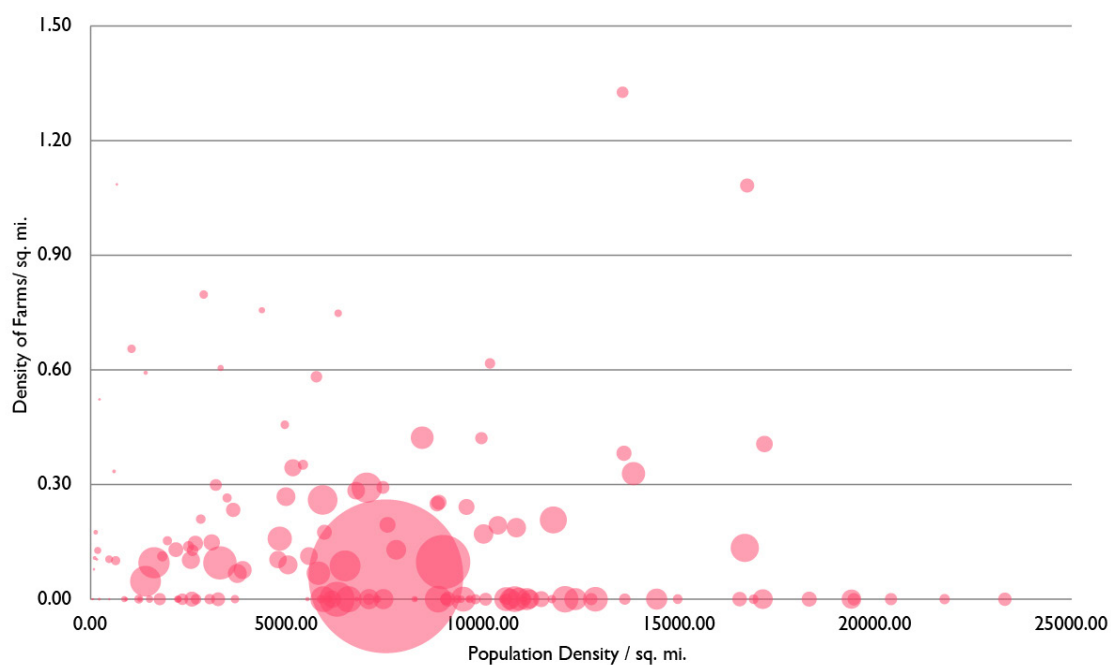


Base map sources: Esri; data collected by researchers—
see Part A: Chart of Resources in this Appendix for detailed sources.

NURSERIES AND POPULATION DENSITY

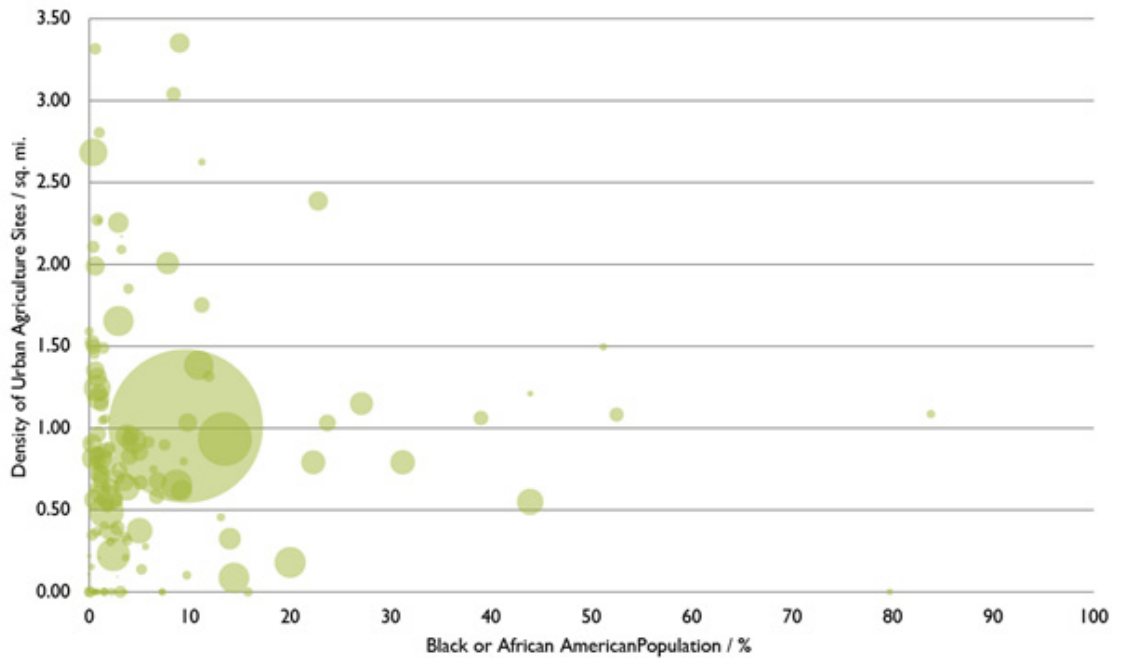


FARMS AND POPULATION DENSITY

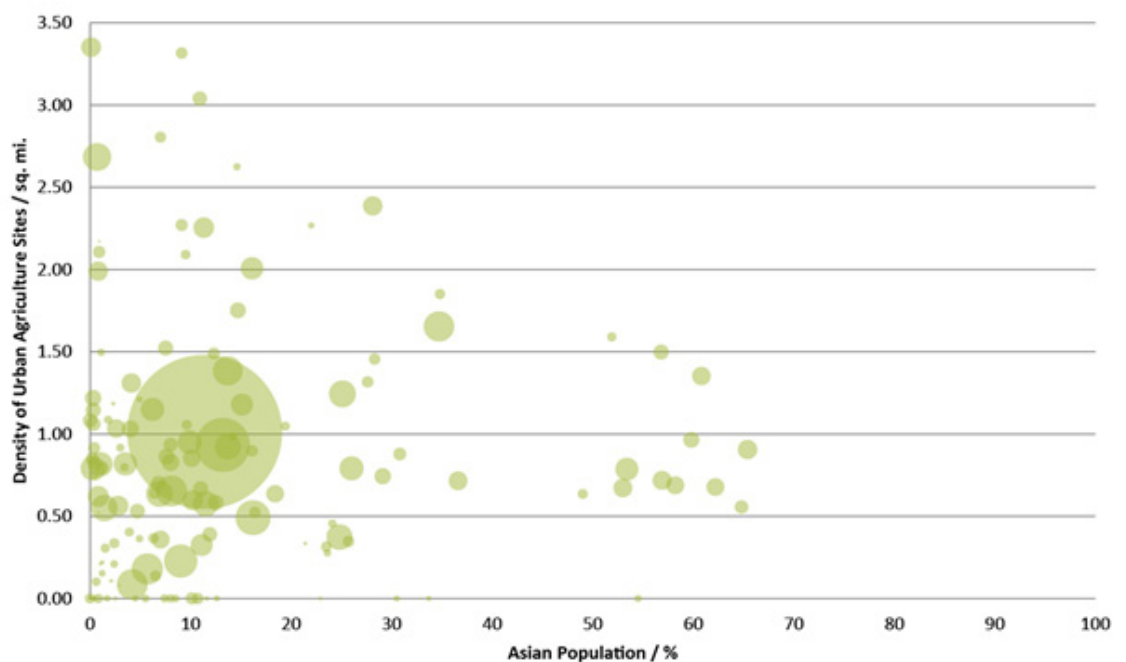


Base map sources: Esri; data collected by researchers—
see Part A: Chart of Resources in this Appendix for detailed sources.

PERCENTAGE OF AFRICAN AMERICAN POPULATION AND AGRICULTURAL DENSITY

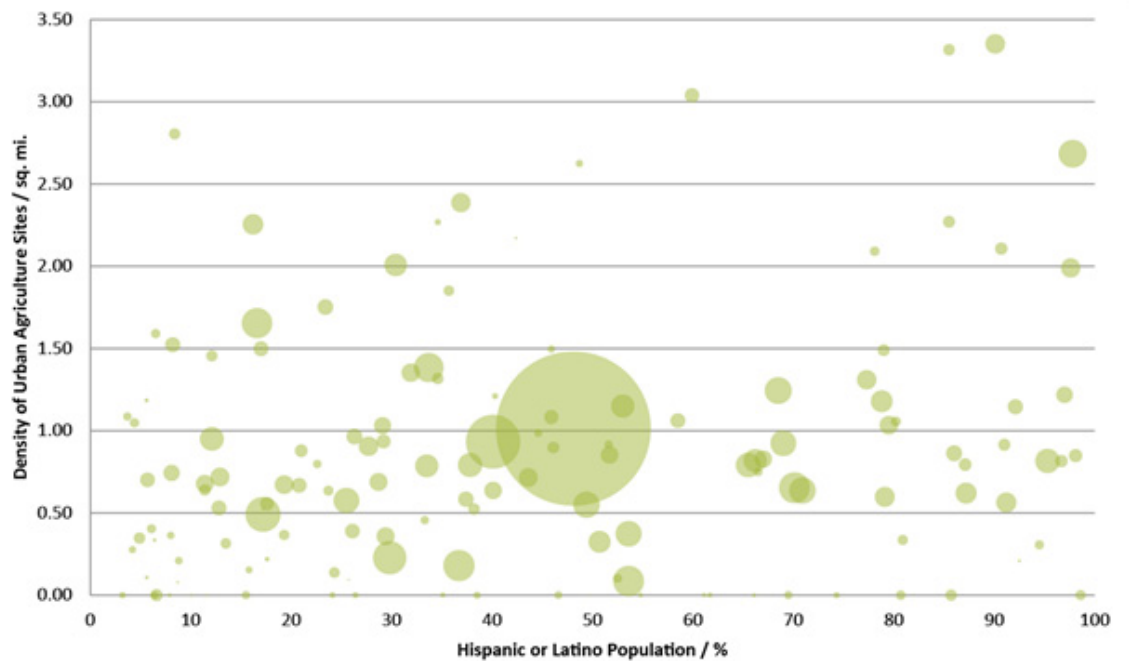


PERCENTAGE OF ASIAN POPULATION AND AGRICULTURAL DENSITY

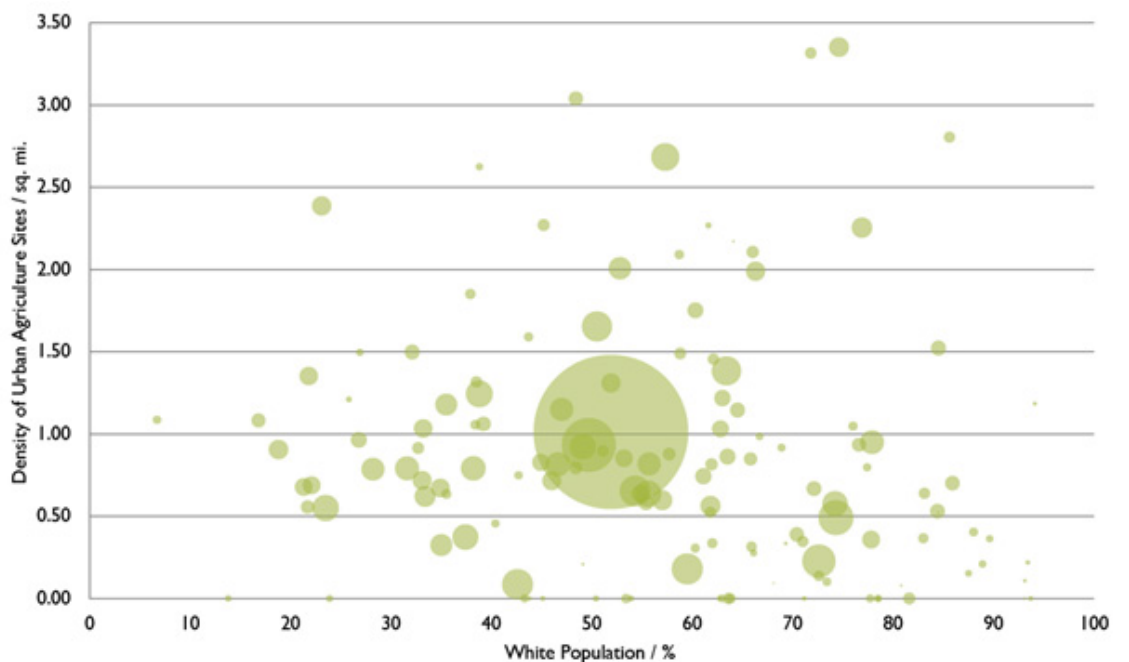


Base map sources: Esri; data collected by researchers—see Part A: Chart of Resources in this Appendix for detailed sources.

PERCENTAGE OF HISPANIC/LATINO POPULATION AND AGRICULTURAL DENSITY



PERCENTAGE OF WHITE POPULATION AND AGRICULTURAL DENSITY



Base map sources: Esri; data collected by researchers—see Part A: Chart of Resources in this Appendix for detailed sources.

A: MAP SOURCES FOR THE ECONOMICS AND GEOGRAPHY OF THE ALTADENA FARMERS' MARKET

Table	Entity	Source Website
Fresh Food Vendors	All thirteen	Altadena Farmers' Market Facebook page: https://www.facebook.com/AltadenaFarmersMarket
Artisanal Food Vendors	All twelve	Altadena Farmers' Market Facebook page: https://www.facebook.com/AltadenaFarmersMarket
Altadena Food-Related Entities	Institute of Domestic Technology	Website: http://instituteofdomestictechnology.com/
	Mariposa Creamery	Website: http://mariposacreamery.com/ Facebook pages: https://www.facebook.com/MariposaCreamery and https://www.facebook.com/AngelesCrestCreamery
	Institute of Urban Ecology	Website: http://www.instituteofurbanecology.org/
	Pine Street Products	Altadena Farmers' Market Facebook page: https://www.facebook.com/AltadenaFarmersMarket
	Muir Ranch at John Muir High School	Website: http://www.muirranch.org/
	Whittier Backyard Farms	Website: http://whittierbackyardfarms.com/
	Zorthian Ranch	Website: http://www.zorthianranch.com/
	Altadena Community Garden	Website: http://www.altadenacommunitygarden.com/
	R.I.P.E. (Residential In-Season Produce Exchange) Altadena	Website: http://www.ripealtadena.com/
	Arroyo Food Co-operative	Website: https://arroyofoodcoop.com/
	Eat Well Market	Website: http://eatwellmarket.com/