

**URBAN AGRICULTURE IN WISCONSIN: A SURVEY AND
DISCUSSION OF LAND USE AND PLANNING PRACTICES IN
HIGH DENSITY COUNTIES**

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for

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I. Introduction

It is no secret that in the past half century urban and suburban populations in America swelled relative to rural areas. However, no corresponding change in our conceptions of and attitudes toward the agricultural system accompanied this shift. In the past, the Jeffersonian model of the rustic farmer harvesting grain from rural landscapes was sufficient to supply and sustain a largely rural and sparse population. As populations flowed into cities though, corresponding systems of cultivation and production largely remained in place. Instead of rethinking the place of agriculture relative to changing demographics, new storage, processing and distribution methods evolved to shuttle food over ever growing distances across the country. This widening gap between producer and consumer requires greater energy consumption, higher transportation costs, increasing use of synthetic preservatives and more pollution. It makes fresh, nutritious agricultural foodstuffs accessible only to those who have access and who can afford it. Furthermore, the lack of local connections with food producers creates concern about the safety and security of the food supply.

An institutional and cultural see change is required to remedy these negative realities resulting from our static conceptions about the place of agriculture in society. In fact, this change is steadily manifesting in the urban agriculture movement. Urban agriculture seeks to reformulate the old school conceptions of agricultural ideals and replace them with new practices and policies that align agricultural systems with demographic realities. By bringing agriculture into our cities, we can decrease transportation costs and energy use, decrease the negative health effects associated with

processing and preservation, decrease the resultant pollution, and increase local access, understanding, education, and connections with the food supply.

To promote urban agriculture in our cities, a vast array of federal and state planning, policy, regulatory, social and monetary tools are necessary. Of course, a multifaceted approach is vital, but this paper will focus on specific land use and planning aspects with an emphasis on zoning ordinances. Besides being a direct method of influencing urban agriculture, these are the tools of choice for state and local governments to influence the utility of public and private lands, and local governments should and must stand at the forefront of this change in order to give it national acceptance.

This paper will pay particular attention to Wisconsin. Part II defines and explains the concept of urban agriculture and sets forth the scope of this inquiry in more detail. Part III describes the land use and planning tools that support the urban agricultural movement. Part IV focuses on the land use and planning tools that currently exist in Wisconsin. Part V concludes with recommendations for future urban agricultural plans in the state.

II. What is urban agriculture, and why is it important?

a. Breaking down traditional conceptions.

Generally, urban agriculture is the growing, processing, and distribution of food and other products through intensive plant cultivation and animal husbandry in and around cities.¹ To understand the concept properly, one must separate from the imagery that normally accompanies the term “agriculture.” In the traditional sense, agriculture is the

¹ Katherine H. Brown & Anne Carter, Community Food Security Coalition - North American Urban Agricultural Committee, *Urban Agriculture and Community Food Security in the United States: Farming from the City Center to the Urban Fringe* (2003), <http://www.foodsecurity.org/urbanagpaper.pdf>.

production of food and fiber commodities such as corn, cotton, wheat, soybeans, beef, dairy, poultry, pork and eggs on vast plots of rural land.² Certainly these items are important to any agricultural system, but confining the definition to traditionally subsidized and regulated cash crops ignores the diversity urban agriculture can provide to a food system. Urban farmers, largely insulated from the monetary lure of subsidies and tax incentives provided to cash-crop farms, provide cities with a wealth of different plants, animal species, and cultivation techniques. Accordingly, land use and planning tools must account for diversity and formulate legal structures that embrace a departure from typical conceptions of plant cultivation and animal husbandry.

“Urban” areas are those areas typically associated with cities proper and the densely populated suburbs that surround them.³ Some literature extends the reach of urban agriculture to exurbs and points beyond that are simply urban influenced.⁴ While there is no doubt that rethinking traditional concepts of agriculture requires one to consider how cities interact with lands beyond their borders, this paper utilizes the narrower concept. This enables a focus on those who are farthest removed from traditional agricultural systems and who are most in need of laws and land use policies that empower them to gain more control over their local food systems.

b. The Possibilities.

So how do diverse agricultural practices manifest inside urban centers? This question requires the demolition of yet another perception: that there is no room for agriculture in built-up areas. The obvious first response to this contention is to point out

² Council for Agricultural Science and Technology, *Urban and Agricultural Communities: Opportunities for Common Ground 21* (2002) [hereinafter CAST].

³ *Id.* at 18.

⁴ *See, e.g., id.* at 18-26; United Nations Development Programme, *Urban Agriculture: Food, Jobs, and Sustainable Cities* 3-4 (1996).

the front and back yards that ring urban dwellings, but this is only the start. For various reasons, vacant lots are ubiquitous in our nation's cities. In 2005, Cleveland, Baltimore, and St. Louis reported 25,000, 42,000, and 29,000 vacant properties, respectively.⁵ The issue of vacant lots is not confined to the nation's largest cities; those with populations of less than 100,000 can often see 25% of city lots go vacant.⁶ Available space is also found on rooftops, which typically comprise at least 30% of a city's total land area.⁷ In larger cities like New York that figure can approach 67%.⁸ We can also look beyond walls to find farmable spaces: some estimates show that indoor farming techniques can yield up to four to six times more production than standard farming operations.⁹ Furthermore, we cannot forget the vast amount public land and the institutions thereon already under municipal management. For example, Dallas, Texas advertises 21,000 park acres, not including an additional 17,196 acres of greenbelt space.¹⁰

Urban agriculture is proving the utility of these available spaces. Operations throughout the country farm using greenbelts, community gardens, restored wetlands, hoophouses, vacant inner-city lots, water tanks, schoolyards, housing projects, rooftops, beehives and chicken coops, all inside city limits. In New York City, Gotham Greens built a 10,000 square foot greenhouse atop a church in Jamaica Queens.¹¹ Alemany Farm in San Francisco organized underprivileged youth and turned a dump for construction

⁵ Lavea Brachman, Lincoln Institute for Land Policy, *Vacant and Abandoned Property: Remedies for Acquisition and Redevelopment*, Land Lines Vol. 17 No. 4 (October 2005).

⁶ *Id.*

⁷ Luke Garnham, Green Roofs and the Promise of Urban Agriculture, 4 Green Roof Infrastructure Monitor 17, 18 (2002), available at <http://www.greenroofs.org/resources/grim-Fall2002.pdf>.

⁸ Brian Halweil, *Eat Here: Reclaiming Homegrown Pleasures in a Global Supermarket* 98 (2004).

⁹ Dickson Despommier & Eric Ellingsen, *The Vertical Farm: The Sky-scraper as Vehicle for a Sustainable Urban Agriculture* 3-4 (2008), available at http://www.ctbuh.org/Portals/0/Repository/T7_DespommierEllingsen.b8a44415-acfe-44b7-9d2d-c31c028f88ea.pdf.

¹⁰ <http://www.dallasparks.org/parks/parksmain.aspx>.

¹¹ Bao Ong, *Food Advocates Envision Rooftop Gardens and Vertical Farms*, New York Times, October 23, 2009.

waste into a four acre flower, vegetable and fruit farm.¹² In Madison, Wisconsin, there are at least 81 registered chicken owners in the city limits experimenting with small-scale poultry and egg farming in their backyards.¹³ Marine Biologists at the University of Maryland successfully raise a variety of captive fish species using indoor tanks.¹⁴ These and other successes experienced by urban farming initiatives across the country demonstrate the viability of agricultural operations within city boundaries, and they further underscore the need for legal structures to support their continued viability and growth.

c. The Problems we face.

The current agricultural approach does little to alleviate social and nutritional deficits for city inhabitants or the negative impacts on our ecosystems. Food insecurity among urban populations is a steadily growing problem that will continue to rise. In 2000, 2.5 billion people lived in cities, and half of those people lived in poverty.¹⁵ By 2030, some estimates indicate that well over half the world population will live in urban areas.¹⁶ The UN estimates that in the United States between 70-80% of the population already lives in urban areas.¹⁷ While America might be “the land of plenty,” 36.2 million Americans lived in food insecure households¹⁸, many of which require assistance from

¹² Heather Knight, *Alemany Farm, 4 1/2 productive acres in S.F.*, San Francisco Chronicle, July 19, 2009 at c-1.

¹³ Jessica Bennett, *The New Coop de Ville: the craze for urban poultry farming*, Newsweek, November 17, 2008.

¹⁴ Timothy B. Wheeler, *A New Way to Farm Fish and Feed the World*, Baltimore Sun, July 1, 2009.

¹⁵ United Nations Development Programme, *supra* note 4, at 162.

¹⁶ Luc J.A. Mougeot, *Growing Better Cities: Urban Agriculture for Sustainable Development 2* (2006).

¹⁷ United Nations, *World Population Prospects: The 2002 Revision, Highlights 1-9* (2003).

¹⁸ Mark Nord, et al., *United State Department of Agriculture, Household Food Security in the United States* (2007), available at <http://www.ers.usda.gov/publications/err66/err66.pdf>.

food pantries and government programs just to obtain enough calories¹⁹, never mind the quality of those calories. These urban poor in America spend upwards of 40% of their after-tax income on food.²⁰ Even when money is available, they lack access to healthy food because of a lack of supermarkets, a lack of transportation to reach them, or simply a lack of nutritional foods inside the store.²¹

The widely accepted monoculture approach to farming is responsible for a tremendous amount of environmental degradation. This method of farming results in greater levels of air pollution, water contamination, soil erosion and lost biodiversity. Expansive rural farms require large amounts of chemical fertilizers to replace depleted soil nutrients, and immense quantities of synthetic chemicals are applied to control insects, weeds and other threats.²² This directly affects water quality, raises water nitrification, impacts the safety of exposed farm workers and eventually the consumer.²³ The ever increasing farm-to-market distances traveled by foods raised on such farms require greater and greater expenditures of energy, which contribute to air pollution.²⁴ Furthermore, the conversion of land to arable crops leads to lost biodiversity resulting from the destruction, alteration, and fragmentation of existing ecosystems.²⁵ In most instances, these harms are not realized by the consumer, and therefore are not internalized

¹⁹ Rhonda Cohen, et al., *Hunger in America 2001: National Report Prepared for America's Second Harvest: Final Report* (October 2001); available at www.mathematica-mpr.com/PDFs/hunger2001.pdf.

²⁰ Kameshwari Pothukuchi and Jerome L. Kaufman, *Placing the food system on the urban agenda: The role of municipal institutions in food systems planning*, *Agriculture and Human Values* 16: 213–224, (1999).

²¹ Tom Larson, *Why There Will Be No Chain Supermarkets in Poor Inner-city Neighborhoods*, *California Politics and Policy* Vol. 7 No. 1 June 2003. *See also* Robin Shulman, *Groceries Grow Elusive For Many in New York City*, *Washington Post*, February 19, 2008.

²² Michael R. Taylor, *The Emerging Merger of Agricultural and Environmental Policy: Building a New Vision for the Future of American Agriculture*, Va. *Env't'l L.J.* 174, January 2001.

²³ *Id.*

²⁴ Halweil, *supra* note 8, at 92 (explaining the great energy expenditures and trucking capacity needed to supply agricultural foodstuffs to cities across the globe).

²⁵ John S. Harbison, *Biodiversity and Law: The Culture of Agriculture and the Nature of Nature Conservation 7* (National AgLaw Center Publications) (February 2004), available at http://www.nationalaglawcenter.org/assets/articles/harbison_biodiversity.pdf.

into prices, because the distances between the consumer and the source of production cause the consumer to lose touch with any negative environmental impacts.²⁶

Inviting agriculture into our cities can rectify many of these social and environmental ills by bringing nutritional stability to urban dwellers and reducing environmental costs. Urban farmers make efficient use of organic wastes by turning them into nutrient rich mulch.²⁷ Strategically placed urban plots can significantly control and filter stormwater runoff, and almost any urban operation can safely and efficiently use reclaimed water to irrigate crops.²⁸ The fact that less food is trucked into the city creates a positive effect on air pollution.²⁹ Increased numbers of trees and green spaces can sequester incredible quantities of carbon from the air we breathe.³⁰ Since the source of production is so close to the consumer, knowledge about the food system increases and people and governments take more proactive steps to gain control over their sources of food.

Land use planning at the local level must consider all of these social and environmental harms in order to realize the gains that urban agriculture makes possible. Simply allowing a backyard garden as a permissible land use is not sufficient to tackle urban malnutrition, nor will it significantly reduce our carbon footprint or water pollution. An institutional response is necessary to create the legal structures that make urban farming operations desirable on a larger scale.

III. Land Use Tools that can support Urban Agriculture

²⁶ Taylor, *supra* note 22.

²⁷ Mougeot, *supra* note 16, at 7.

²⁸ CAST, *supra* note 2, at 27.

²⁹ Mougeot, *supra* note 16, at 8.

³⁰ CAST, *supra* note 2, at 31.

The growing experimentation and success with urban farming methods and initiatives indicates that the municipal land use climate is ripening in many cities. But what exactly are the tools that make urban lands available to citizens, organizations and other entities? This section explains some of the important legal mechanisms that encourage agricultural land use inside cities. When possible, examples are provided to highlight the success of these tools. It is important to note that no single land use tool or policy is a panacea to establish healthy urban farming operations. Throughout this section, the highlights and pitfalls of the various methods are addressed as well as how each method can compliment others.

a. Zoning

In the US, efforts to regulate the use of land and space manifest most explicitly in zoning ordinances. These ordinances outline and explain allowable property uses, prescribe usage intensities and specify structural requirements for activities on all land parcels in a jurisdiction.³¹ An accessory use is the use of land that is subordinate, incidental to, and customarily found in connection with the principal use allowed on a lot by the zoning law.³² Variances, special use districts, special use permits and conditional use permits are other zoning sub-categories that allow land parcel uses that do not fall within the guidelines of the established zone.

Zoning ordinances can most clearly explain to a community in which zones urban agriculture is allowed and in which zones it is prohibited. Cities can use zoning to clearly

³¹ CAST, *supra* note 2, at 71-72.

³² City of Austin Planning Glossary, found at <http://www.ci.austin.tx.us/zoning/glossary.htm> (last checked October 28, 2008)

demarcate zones for urban agriculture as a primary land use.³³ Zoning can preserve green belts or green corridors within a city for agricultural uses, and it can prevent the destruction of agriculturally viable plots that are already in existence or that can be used in the future.³⁴ Furthermore, it can allow for varied uses of structures in a manner consistent with urban agriculture, such as rooftop gardening or indoor farming.³⁵ Overall, zoning promotes multifunctional and compatible land uses and encourages community participation in the management and maintenance of city spaces.

Zoning is not without complication. The main problem with zoning is that it is only as permanent as the social, political economic will that supported its establishment in the first place.³⁶ Without this will, or with the influence of economic pressure to develop open lands, zoning policies will fail. Local aversions to certain agricultural practices, such as small scale animal husbandry, can also threaten established zoning ordinances. Similarly, a fear of depressed property values can also wreak havoc on an established zone. Accordingly, longer term solutions to the preservation of city spaces for agricultural use must accompany any urban zoning initiative.

b. Comprehensive Plans

A city's comprehensive plan is a method that cities use to guide near-term and future land use decisions made to support a city's development goals and maintain a certain character.³⁷ As such, it has a direct impact on a city's zoning concept and zoning

³³ Henk de Zeeuw, et al., Resource Centres on Urban Agriculture & Food Security [hereinafter RUA], Courses of Action for Municipal Policies on Urban Agriculture 4 (October 2006), available at <http://www.ruaf.org/node/1088>.

³⁴ Henk de Zeeuw, et al., RUA, The Integration of Urban Agriculture in Urban Policies 2 (2000), available at <http://www.ruaf.org/node/108>

³⁵ See Howe, J. Cullen, Green Roofs, 2008 Emerging Issues 3069 (Lexis, November 5, 2008).

³⁶ de Zeeuw, supra note 33, at 4.

³⁷ Eric Damian Kelly, Community Planning: An Introduction to the Comprehensive Plan 47 (2nd ed.) (2010), p. 47.

decisions.³⁸ Comprehensive plans are strategic, and they employ a variety of mechanisms that inform land use and development decisions that affect the economic health and quality of life of the city and the residents therein.³⁹ Because urban agriculture directly impacts these issues, it should be an integral part of any planning process. Urban agriculture is a tool that can be used by comprehensive planners to address agricultural issues related to community livability, environmental and natural resource conservation and use, food security, and local economic vitality.⁴⁰ However, just as zoning ordinances may be repealed, so does the comprehensive plan bend to the current political climate. Just because a city institutes a 20 year plan does not mean it cannot revise the plan at year 5.⁴¹ Though the comprehensive plan is a strong statement, it is simply a set of guidelines and objectives that can easily change and adjust to the times.

c. Conservation Easements/Purchase of Development Rights

A conservation easement allows a third party to buy a landowner's development rights and restricts land use to an agricultural purpose.⁴² This tool is especially useful in and around urban areas where landowners face significant pressure to sell their property as its development potential increases.⁴³ In this arrangement, the landowner voluntarily enters into a contract with a city, conservation group or other third party, and the group pays the landowner an amount roughly equivalent to the land's economic development potential. The landowner retains title to the land and receives certain tax benefits, and the

³⁸ See, e.g., Cal. Gov't Code § 65860(a); 35 J.L. Med & Ethics 138, 141 (2007).

³⁹ *Id.* at 47-48.

⁴⁰ CAST, *supra* note 2, at 80.

⁴¹ Kelly, *supra* note 37, at 57.

⁴² CAST, *supra* note 2, at 75-76.

⁴³ *Id.*

land is available in perpetuity only for agricultural purposes.⁴⁴ This is an attractive tool for municipal governments wishing to set aside lands for urban agricultural use because the municipality does not have to pay the full costs to acquire title to the property, and because the city does not incur the costs of maintaining and managing the property, yearly costs remain low.⁴⁵

The biggest drawback of conservation easements is cost. Though the city does not pay the entire cost to obtain title to the land, the potential development value it pays to the landowner can be extremely high.⁴⁶ Thus, a city needs large coffers from which to draw if it intends to embark on a meaningful campaign to preserve urban agricultural lands in this manner. Furthermore, the opportunity to buy conservation easements can easily pass⁴⁷; if the landowner has to wait several years for the city to pay up, but a developer is willing to pay now, the developer wins. This method is in contrast to the immediacy and certainty that a zoning ordinance can provide. But again note the give and take; this method is permanent and in contrast to zoning's fickleness.

d. Land Trusts

Land trusts are private, non-profit organizations that acquire and hold interest in land for the purpose of conserving it in perpetuity.⁴⁸ Such organizations are in wide existence, and their numbers continue to multiply.⁴⁹ As non-profits, they are registered with the Internal Revenue Service, and individuals or corporations donating funds or

⁴⁴ Adrienne Lyles-Chockley, *Building Livable Places: The Importance of Landscape In Urban Land Use, Planning, and Development*, 16 Buff. Env'tl. L.J. 95, 119 (2008-2009).

⁴⁵ *Id* at 120.

⁴⁶ CAST, *supra* note 2, at 76.

⁴⁷ *Id* at 74, 76.

⁴⁸ *Id* at 75, 77; Lyles-Chockley, *supra* note 44, at 120.

⁴⁹ CAST, *supra* note 2, at 77.

property to support land trusts receive tax deductions in return.⁵⁰ Land trusts, unlike conservation easements, take title over the purchased lands, and they can often acquire land at a cheaper price than governments can because land trusts can spend more time negotiating with land owners.⁵¹ Land trusts also serve a vital role because they can control the disposition of the land that is farmed. For instance, many land trusts mandate that their farms engage in community supported agriculture. Thus, the land trust also serves as a vital link between the urban farm and the surrounding community.⁵² The biggest drawback to land trusts is that some entity must want the land in question. It may be possible to lure land trusts to purchase certain lands with tax or other monetary incentives.

IV. The Urban Agriculture Climate in Wisconsin

The various land use and planning tools that exist at the state and local level are functional methods that are proven to support urban agricultural operations. Using them in combination can create a stronger master plan that a city can implement in order to achieve a coherent, unified urban farming system. The question now is whether Wisconsin and the municipalities within have the legal structures in place to make urban agriculture a reality, as it is becoming around the country. By conducting a survey of municipal ordinances and land use practices, we can determine the extent to which Wisconsin is ready to be a part of this agricultural sea change, or how much work the system needs to make urban agriculture a reality.

⁵⁰ *Id.*; Lyles-Chockley, *supra* note 44, at 120.

⁵¹ *Id.*

⁵² Neil D. Hamilton, *Greening Our Garden: Public Policies to Support the New Agriculture*, 2 Drake J. Agric. L. 357, 368 (1997).

To keep focus on the theme of urban, and not rural, agriculture, this analysis focuses on municipalities in the six most densely populated counties in Wisconsin: Milwaukee, Waukesha, Kenosha, Racine, Brown, and Dane.⁵³ For each county, the survey includes the largest municipality and a selection of surrounding municipalities with population densities of 1,391 persons per square mile or more.⁵⁴ Since the vast majority of the land inventory under the county umbrella is rural, county land use practices are not a part of the survey.⁵⁵ This survey does not separately analyze or come to conclusions for each municipality. Instead, it takes a holistic approach by examining these regions together and drawing conclusions about Wisconsin's population centers.⁵⁶

a. Municipal Zoning Ordinances

Surveying the websites of various community gardening organizations in Wisconsin, it is evident that the citizens of the state's urban centers long ago began implementing farming techniques in cities.⁵⁷ Answering the question of whether municipal zoning laws encourage this activity, or stand as an obstacle to it, will help determine the needed path to advance similar initiatives in the future. Your average home garden and greenhouse are a typical, customarily accepted accessory uses in most

⁵³ See Table 1. All data derived from the American Fact Finder tool, available at <http://factfinder.census.gov>, last verified on December 13, 2009.

⁵⁴ By no means is this survey exhaustive. The results of this survey and the opinions reflected herein are not conclusive with regards to the six counties, or the entire State for that matter. However, this paper does include 10 of the 20 most populous municipalities in the State, so I expect that it is a good bellwether of trends and attitudes.

⁵⁵ The interaction between city and county governments, especially at the city's borders, is a key consideration in urban agricultural planning, and that fact is not lost on this author. However, this paper will only focus on what is happening inside the city limits.

⁵⁶ On a similar note, the analysis that follows is what the author believes is illustrative of the larger body of research conducted. For the author's complete take on every municipality researched for this paper, refer to Table 2.

⁵⁷ See, e.g., Community Action Coalition (<http://www.cacscw.org/gardens>), University of Wisconsin Cooperative Extension FEEDs Program (<http://feeds.uwex.edu>), Milwaukee Urban Gardens (<http://www.milwaukeeurbangardens.org>), among many, many others.

residential areas, even if not explicitly so. However, it is the larger agricultural system, aside from individual efforts, that urban agriculture seeks to influence.

To help answer this question, most of the analysis of zoning laws, unless otherwise noted, is based on Table 2, the ordinance snapshot. This snapshot is the author's attempt to categorically rate each municipality's zoning laws with respect to certain core agricultural functions. Field research was not a part of this inquiry, and only limited interviews of city and county officials were conducted. Also, one must read between the lines of almost every ordinance, read several ordinances together, and assume how city planning officials might act with regards to certain endeavors. Thus, the ratings system is not 100% certain. Regardless though, enough data is presented to paint a reasonably rough picture of zoning ordinances in the most populous urban areas.

Plant Cultivation. In some municipalities, urban agricultural activities are explicitly permissive in certain zones. For instance, Milwaukee incorporates a wide range of agricultural activities, including community gardening, in the core definition of "agricultural uses." Such uses are allowed in most residential and industrial districts, and, in some cases, city parkland. Likewise, Ashwaubenon – close to Green Bay – defines agricultural uses as those that involve the "cultivating and harvesting of crops for human or livestock consumption," and allows it in all residential zones and some industrial and commercial zones. Brookfield permits "crop and tree farming" and "horticulture" in 4 residential districts and 2 mixed-use districts. Racine explicitly incorporates the term "community gardens" in the list of conditional uses for all residential and industrial districts, as well as some commercial zones.

Sometimes, any urban agricultural activity is out of the question. Such restrictions often rear their head in the most densely populated urban areas where little open terrain is available. West Allis, a city in Milwaukee County which is itself surrounded by other cities and towns, leaves no room to envision any agricultural operations outside of the average home garden. Greenfield, similarly situated and in the same county, also lacks permissive language to that effect. However, even a city like Kenosha, which ostensibly does not face the constraints of Greenfield and West Allis, only allows “agriculture” in one residential zone and the park district.

Quite often though, the question of whether certain agricultural activities are allowed on a parcel is ambiguous. For example, the Town of Verona permits “cultivation” in just about every zoning category, but such cultivation must be restricted to 20% of buildable lots. That is certainly enough land for an individual home gardener on an ordinary city plot, but it probably does not enable the creation of a community garden or other larger operation unless the lot is large. In Madison, community gardening is only explicitly permitted in manufacturing districts. However, Madison has a great number of community gardens and other such operations outside of manufacturing zones. This begs the question of how the community gardens fit into Madison’s zoning scheme.⁵⁸ Green Bay allows “agriculture” as a conditional use in residential zones, but conditional uses are not certain and the instead subject the applicant to a whole host of considerations that do not burden permitted uses. This further underscores that ambiguity is present even when certain terms and language seem facially permissive.

⁵⁸ Some organizations explain that urban gardens are permitted as an accessory use. At the same time though, they often have to drum up community support for a garden, which leads one to presume that the use is conditional. Hence, the question still begs for an answer.

Animal Husbandry. Unlike the cultivation of plants, raising animals inside city borders is a foreign concept for some and a nuisance (literally and legally) for many others. While there are a great many obstacles to larger scale plant cultivation in cities, the obstacles blocking animal husbandry are greater.

In Milwaukee, the zoning code explicitly indicates that the raising of certain livestock is a permitted use in most residential, industrial and park zones. The definition of “agricultural use” there is wide, and includes commonly domesticated livestock. However, there is a big caveat: the health code. The health code informs the zoning code with respect to animals and it specifically prohibits any domestic livestock from being raised in the city, with only certain narrow exceptions made by the health commissioner. Time and again, this sort of qualification substantially narrows the permitted uses relating to animal husbandry. Just as in Milwaukee, the health officer in Racine is the approval authority for an animal brought onto city property. In Waukesha and Middleton, the zoning code does not explicitly prohibit animals from properties, but a restrictive nuisance analysis is applied to any use not explicitly provided for. Similarly, Kenosha and Green Bay provide for limited raising of animals in certain districts, but only after the applicant receives permission from the city’s common council or health officer, respectively. While there is no doubt that agencies other than the city zoning board play necessary roles to protect public health and welfare, a more uniform and streamlined system of permissions and restrictions would be beneficial to bring certainty to the practice of small-scale animal raising in cities.

With respect to particular animals, some municipalities are explicitly permissive. For instance, Madison has a well known chicken ordinance that permits the raising of 4

hens within low to medium density residential districts and subject to certain qualifications. Racine, Wauwatosa and the Towns of McFarland and Burlington permit beekeeping subject to conditions that funnel swarms into sequestered hives. Some cities and towns, like Green Bay, Brookfield and Hartland, are permissive with respect to many varieties of animal, but only on the lower density residential and agricultural zones. More often than not, though, the question of what type of animal is allowed where and under what conditions is ambiguous. Whether the would-be urban chicken wrangler can throw a coop in the backyard is a question that requires the applicant to look at much more than the zoning ordinance and converse with more people than just the city planners.

Getting the Farm to the Market. If and when an urban farmer establishes his or her foothold in the city, and when that person or group grows or raises a surplus, an important question arises: how do I get my goods out to the market? If urban agricultural initiatives are to reach beyond individual sustenance, a mechanism must exist to allow non-farmers to share in and benefit from the bounty. While informal marketing works at some level, public sales are needed to increase public access and put some profit into the hands of the producers.

There are a number of municipalities that mention seasonal markets and roadside stands in their zoning ordinances. In most municipalities, such stands and markets are permissible as temporary uses. Roughly, this means that the particular marketing method cannot exist in perpetuity, which usually means sales are limited by time of day, season, or number of days per year in operation. Milwaukee and Brookfield have quite liberal ordinances that allow temporary stands in just about every zone within the city

(Brookfield also allows seasonal markets in the same way). Kenosha allows seasonal markets in all zones as well, and it permits roadside stands without condition in agricultural districts. Green Bay is another city with quite permissive ordinances with respect to temporary stands in most districts. Madison favors permits roadside stands in the agricultural and conservancy districts.

With respect to Madison, one might ask: but what about the Dane County Farmer's Market? It certainly is not a roadside stand, so where does it fit into the zoning scheme? While Madison is home to the largest outdoor farmer's market in the country, the zoning ordinance is not the legal method that explicitly allows it. Such is the continuing theme of ambiguity noted throughout this survey: while you want it to, the zoning ordinances do not always tell the whole story.

Patterns of Use. Besides helping one to determine whether certain activities are permissible in a given municipality, Table 2 also provides insight into the reasons some areas are more or less permissive than others. The municipalities listed in the table are grouped according to the county in which they lie, from the most densely populated county in the survey (Milwaukee) to the least (Dane). At the top of the table, the grid is painted quite red and orange, with a few smatterings of green and red. That portion of the table represents cities in Milwaukee and Waukesha counties, the two most densely populated counties in the state. From there, as you work your way down Table 2, the amount of green and yellow indicators (marking more permissive zoning) become more prevalent. There you find the less densely populated counties in the survey.

It is no coincidence to see that permissiveness increases in the less densely populated counties. Cities like Milwaukee, West Allis, Brookfield and Waukesha are

urban centers that are locked in by other municipalities. Thus, the open land inventory from which to draw is small within the city, and there is little available on the periphery. This contrasts cities like Madison, Green Bay and Racine, which are not compacted and restrained by surrounding towns and suburbs, and their peripheries are largely open. Two inferences can be drawn from this fact. First, it is likely that cities in densely populated counties can ill afford to open up land to small, less valuable, and low-tax generating agricultural operations, whereas the cities in the lower density counties have the ability to grow out and keep lands within and surrounding the city center available for enumerated agricultural uses. Second, the nuisance factor is less likely to rear its head in the lower density counties because the cities within can sufficiently contain urban agricultural practices, especially animal-related activities, in lower density zones.

The larger question to ask, based on these inferences, is whether cities like Madison, Green Bay and Racine will be forced to change their zoning laws and put the squeeze on urban agricultural activities as open land inventories shrink and surrounding cities and suburbs begin to encircle the city proper. The answer is not obvious and of course it depends on how these and similarly situated municipalities react to growth. A well designed comprehensive plan can control those reactions. What this does underscore is the need to institutionalize urban agricultural activities into the zoning code. When pressure comes to bear, it is easy to overrule and overwrite the various piecemeal ordinances that combine to allow certain agricultural activities inside cities. However, a zoning code that robustly represents urban agricultural interest may withstand pressures of a greater degree.

b. Important Themes in Comprehensive Plans

Unlike zoning, comprehensive planning is not a mandate. Rather, it is a guidepost that focuses a city's growth and development in the near-term and years into the future. Comprehensive plans are a municipality's conscience, shepherding decisions of city councils, planners, and numerous other decision-making and law-making authorities. Thus, the contents of a plan can foretell the objectives of growth and the development of laws and regulations as they pertain to agricultural activities inside the city. In Wisconsin, the collective conscience about agriculture in cities is certainly encouraging, but there still exists many negative indicators relating to agriculture in cities and the preservation of available lands.

The plans of cities like Madison and Racine stand head and shoulders above other municipalities in the survey. Other cities would do well to take heed of these plans and incorporate elements of each. Up front, each city touts urban sustainability as a main goal in the comprehensive plan.⁵⁹ For both, the local cultivation of nutritious foods is a centerpiece of sustainability.⁶⁰ The first key element of both plans is the preservation of spaces to allow agricultural activities in and around the urban center. Madison recognizes that it is necessary to control intensive development in rural and agricultural zones on the city fringe in order to accomplish its wider sustainability goals.⁶¹ It achieves control on the fringe by preventing land-divisions for non-agricultural use and working with surrounding towns to prevent development on agriculturally viable lands.⁶² While Racine does not specifically address land preservation on the fringe, it does reiterate the

⁵⁹ See City of Madison Comprehensive Plan Vol. 1, p. 7 (January 2006) [hereinafter "Madison Plan"]; City of Racine Comprehensive Plan Ch. IV, p. 7 (Draft Plan) (October 2009) [hereinafter "Racine Plan"].

⁶⁰ Racine Plan, *supra* note 59; Madison Plan, *supra* note 59, at Vol. II, p. 6-5.

⁶¹ Madison Plan, *supra* note 59, at Vol. I, p. 2-26.

⁶² *Id.*

need to keep surrounding farmlands viable by maintaining strong economic ties and providing a market for locally produced foods.⁶³

A second important element of each plan is the effort to make agriculture a permanent fixture with city borders. Both plans see community gardens and similar sized operations as the core of food sustainability efforts. Madison and Racine both identify community gardens as the centerpiece of urban food production.⁶⁴ Each city lives up to those goals by providing for permissive zoning of community gardening activities.⁶⁵ In Madison, a draft urban agricultural zoning ordinance is in the works, which would, if approved as written, be the most permissive zoning ordinance in the state, welcoming more than just community garden plots into the urban setting. A key third element is the need to encourage markets to get local and urban-grown foods to the table. Both city plans address this by setting goals for the growth of existing farmers markets, while exhibiting a desire to expand such operations.⁶⁶ What is lacking in both plans though is any mention of animal husbandry inside city borders. Each plan's contemplation of agriculture is largely confined to plant cultivation.

While other city plans do not heed urban agricultural needs inside the city as well as Racine and Madison, they nonetheless exhibit an awareness of the role that urban agriculture plays in developing a city's character and increasing the awareness of local foods and sustainable eating. Green Bay recognizes the importance of agricultural lands that ring the city limits, and it states a regional planning goal of working with

⁶³ Racine Plan, *supra* note 59, at Ch. V, p.2.

⁶⁴ *Id* at Ch. IV, p. 7; Madison Plan, *supra* note 59, at Vol. II, p. 2-23.

⁶⁵ *See* discussion *supra* at 14-15.

⁶⁶ Madison Plan, *supra* note 59, at Vol. II, p. 6-5; Racine Plan, *supra* note 59, at Ch. V, p. 11.

surrounding town and villages to preserve these lands for agricultural use.⁶⁷ The Green Bay Plan Commission also recognizes the importance of food security, and it sets forth guidance to encourage agricultural production and sales within the city limits.⁶⁸ In a similar vein, Brookfield plans to expand the size and number of local farmer's markets while at the same time increasing the availability of local foods and increasing knowledge of their availability.⁶⁹ Other city plans, while not addressing the core issue of food security, establish goals that are complimentary to that issue. For instance, Greenfield contains a provision in its plan that encourages the development of green roofs; this is an important consideration when speaking of efficient urban land use and urban farming methods.⁷⁰ Waukesha, like many other cities, speaks of brownfield remediation.⁷¹ While it does not specifically direct the conversion of brownfields for agricultural purposes, they hold promise for urban revitalization and sustainable urban practices.

There is much promise in the stated goals of many city plans. However, even the most promising plans, like those of Madison and Racine, exhibit one element detrimental to urban agricultural initiatives: the idea that agricultural lands in the city limits are destined for development. Madison identifies almost 600 acres of agricultural lands under city control,⁷² but the plan concedes that most of that will be developed under

⁶⁷ City of Green Bay Comprehensive Plan Vol. II, p. 18-5 [hereinafter "Green Bay Plan"].

⁶⁸ Green Bay Plan Commission, *Presentation on Sustainable Activities*, available at <http://www.ci.green-bay.wi.us/planning/index.html>.

⁶⁹ City of Brookfield DRAFT Comprehensive Plan, p. 89, (August 27, 2009) [hereinafter "Brookfield Plan"].

⁷⁰ City of Greenfield Comprehensive Land Use Plan, p. 36 (November 17, 2008) [hereinafter "Greenfield Plan"].

⁷¹ City of Waukesha Comprehensive Plan, p. 7-20 [hereinafter "Waukesha Plan"].

⁷² Madison Plan, *supra* note 59, at Vol. II, p. 6-5.

current conditions.⁷³ In the same way, the Racine city plan identifies 625 acres of agricultural and undeveloped lands within the city limits that will undergo some form of development.⁷⁴ Often, cities make a clear statement regarding the inevitability of development on such open lands. Greenfield states that “land in the City is far more valuable for development than continued farming activities.”⁷⁵ Green Bay makes certain that agricultural lands inside its borders are an “interim” use, and it forecasts that agricultural lands are not needed in the city’s future development plans.⁷⁶ Waukesha similarly expects all agriculturally viable lands in its inventory to be developed by 2035.⁷⁷ All of this is indicative of a mindset that sees agricultural uses as incompatible with urban life, even in the cities friendliest to urban agricultural activities.

c. The Roles and Possibilities of Land Trusts and Conservation Easements

Land trusts and conservation easements, unlike zoning and comprehensive plans, more concretely address the need to make lands permanently available for agricultural uses. In Wisconsin, there are state, local, and private programs that can achieve this goal with significant effects.

The state-run PACE program provides state funding for the purchase of agricultural conservation easements.⁷⁸ It provides up to 50% of the cost of purchasing the easement to any local government or private organization. However, the purchased lands must exist in a county farmland preservation area, which probably restricts beneficiaries to lands just on or beyond the city fringe. Regardless, this is still a method to contain

⁷³ *Id.*

⁷⁴ Racine Plan, *supra* note 59, at Ch. VI, p. 8.

⁷⁵ Greenfield Plan, *supra* note 70, at 36 (November 18, 2008).

⁷⁶ Green Bay Plan, *supra* note 68, at Vol. II, p. 18-6.

⁷⁷ Waukesha Plan, *supra* note 71, at 7-11.

⁷⁸ *See* Wis. Stat. § 93.73 (2009).

growth and ensure the supply of local, fresh foods to adjacent urban areas. Also the Wisconsin Department of Natural Resources (DNR) runs the Wisconsin Brownfields Initiative which has been administered since 1994 with great success.⁷⁹ The Initiative successfully remediated brownfields sites to create parks and recreation areas within the cities across the state.⁸⁰ While a 2006 report does not list any urban agricultural initiatives as beneficiaries, the Brownfields Initiative nonetheless holds promise for any community organizations or local governments who wish to transform vacant urban lots into productive areas. Another potentially beneficial program is the Knowles-Nelson Stewardship Program (Stewardship) administered by DNR. The state created this program in 1989 to preserve valuable natural areas and wildlife habitat, protect water quality and fisheries, and expand opportunities for outdoor recreation.⁸¹ It provides aid for the acquisition and development of local parks, urban green space grants, urban rivers grants, and grants to fund the acquisition of development rights.⁸² This program certainly has potential to preserve and maintain urban lands for agricultural use. Unfortunately, the state's potential for involvement in urban agricultural operations seems to end with these programs. Most state preservation efforts are directed at farmlands outside of the city limits. Thus, if the state wants to play a larger role in farmland preservation, it should formulate and promote programs to encourage farming inside the city.

While the state can contribute to the preservation of agricultural areas in and around cities with the aforementioned programs, many preservation initiatives within the state

⁷⁹ Land Recycling Act of 1994 (Wisconsin Act 453)

⁸⁰ See Wisconsin Brownfields Initiative 2006 Report, available at <http://www.dnr.state.wi.us/org/aw/rr/archives/pubs/RR847.pdf>.

⁸¹ Wis. Stat. § 23.09 (2009).

⁸² Department of Urban & Regional Planning, University of Wisconsin–Madison/Extension and Wisconsin Department of Natural Resources. *Planning for Natural Resources: A Guide to Including Natural Resources in Local Comprehensive Planning* (January 2002).

are accomplished by private land trusts that acquire lands through conservation easements with state and federal assistance. Preservation is indeed a worthy goal, but for the purposes of this survey, the mission statement of each land trust must bear some indication that the organization desires to save agriculturally productive lands. The National Heritage Land Trust (NHLT) is one such organization. It has worked to preserve over 6,300 acres of land in Dane County, many for agricultural use.⁸³ Most importantly this land trust recognizes the need to preserve these lands in light of impending development pressures. The Madison Area Community Land Trust (MACLT), while smaller in size and scope than the NHLT, has proven how a land trust can guide community development in sustainable ways. MACLT's main project is the Troy Gardens development and urban farm. It demonstrates how land trusts can guide and leverage their holdings to embrace urban agriculture and sustainable development.

Many other land trusts exist across the survey area. The Milwaukee Area Land Conservancy (MALC) and the Ozaukee/Washington Land Trusts (OWLT) operate in and around Milwaukee County. In Waukesha, the Tall Pines Conservancy makes part of its mission the protection of remaining farmland in the county. The Kenosha/Racine Land Trust works to preserve open spaces in southeast Wisconsin. But unlike the NHLT and MACLT, none of these land trusts possess significant agriculturally productive holdings. Instead, they focus more on the preservation of open spaces and forested lands. While this endeavor is certainly worthwhile, there is no indication that these organizations can or will significantly assist the preservation of agricultural spaces in or around cities. This is not to say that they cannot help. With more awareness and outreach, there is the

⁸³ <http://www.nhlt.org/pdf/newsletter-2009-winter.pdf>.

possibility that the efforts of these and similar land trusts organizations can be directed at urban agricultural conservation and preservation.

V. Analysis, Conclusions and Recommendations

a. The state of things.

The atmosphere surrounding urban agricultural development in the state shows promise. The fact that city plans and zoning codes make specific mention of certain urban agricultural activities indicates the level of awareness is growing. Land trusts and state programs stand at the ready to preserve certain lands. However, most of the survey area is a long way from truly embracing agricultural operations inside city borders.

City plans are the guiding force for the development of agriculture-friendly ordinances, regulations and policies. Racine and Madison are the only cities in the survey that directly address urban agricultural activities in their zoning ordinances. Not coincidentally, their corresponding plans directly address agriculture and food security in the city and its periphery. Unfortunately, most city plans do not account for these important development themes. If they did, positive changes in law and regulation would follow suit, just as in Racine and Madison.⁸⁴ Furthermore, the mindset that agriculture is an interim use must be eliminated. Even in the friendliest city plans, this language is present to some degree, and it probably evolves from development pressures and the need to expand and grow revenue. If cities are not willing to stop growth on their periphery or preserve agricultural lands in the existing land inventory, then one will be hard pressed to convince a city to preserve viable lands well within the urban border where the development pressures are greater still. In that event, land trusts can fill the gap to a

⁸⁴ In fact, the state comprehensive planning law, Wis. Stat. § 66.1001, et seq., mandates that municipalities follow their comprehensive planning goals. Thus, the inclusion of urban agriculture-friendly goals provides city's with an impetus to act and provides leverage for community organizations and activists.

degree. However, their resources are limited, and state-guided action is necessary to make land available for agriculture inside the city center.

In spite of the goals city plans do or do not set forth, municipalities have great power and leeway to tailor their zoning ordinances. In some cases, they are explicitly permissive: community gardens in Racine and Madison, chickens in Madison, bees in Wauwatosa. But more often than not, one must read between the lines to determine the permissibility of a certain activity. Even still, if a positive conclusion can be reached, the judgment sits on shaky ground. Perhaps the final decision rests with a health administrator or a multi-level review with the zoning board. This sort of uncertainty does not promote or encourage any activity, much less plant cultivation and animal husbandry. Such activities carry with them some measure of external effects of which a community may take notice, such as animal and equipment noise, smells, asymmetric structures and other aesthetic concerns. With those effects in mind, it is easy to deny a permit or cause the ouster of an established activity. This is where zoning ordinances can directly influence urban agricultural initiatives and protect them as a vital part of the urban food continuum. Unfortunately, all cities in the survey fall short in this respect; even if they are permissive as to some activities, they fail to address a spectrum of activities that would make an urban food system complete. Land trusts and easement programs can only do so much to fill the gap here, as those programs are limited by what the zoning ordinance governing the property allows.

b. Where do we go from here?

To properly promote and advance urban agricultural activities within the state's urban areas, city plans and zoning ordinances must be amended or modified with

specificity to combat the uncertainty and restrictiveness that they currently foster. Based on the survey results, this is a list of suggested moves that a city can consider to make urban agricultural operations a closer reality.

City Plans

- City plans must consider food supply systems generally, and urban agricultural in particular, in their plans. Most plans incorporate mentions of sustainability, but fail to carry that concept through to food systems planning.
- Open space preservation goals should incorporate community gardening, small-scale animal husbandry and plant cultivation. Most open space goals focus on aesthetics and recreation, but there is no reason functional uses, like urban agriculture, cannot be included.
- City plans should focus on building around, instead of building over, agricultural lands. Cities should not view agricultural lands as a temporary use in light of future development patterns.
- Set specific goals for urban agricultural activities to ensure access and opportunity to raise crops and animals. For instance, a city plan could establish a goal of “x” number of community gardens for every “y” number of residents, or it could establish a limit on animal permits within a given area to mitigate the complaints associated with such activities.
- Establish goals for the number, size and frequency of farmers markets to make urban-grown foods available on a consistent basis.
- Identify lands that lack development potential and set some aside for agricultural activities. The clearest example is to use brownfield and vacant lot inventories.
- Where development pressures do exist, city plans should encourage and create incentives for developers, builders and businesses to invite agricultural activities on the open areas of their respective parcel. This way, the city gains the value of development while opening niche areas to agricultural uses.

Zoning Ordinances

- Specifically define “urban agriculture” in the zoning code. Separating notions of traditional agriculture from urban agriculture will help city zoning boards, concerned residents, and would-be urban farmers better understand the range of permissible activities with certain zones.

- Expand the zones in which urban agriculture is permissible. It should not be confined only to areas zoned for agriculture. Besides residential zones, it should be incorporated into commercial, manufacturing, and industrial zones where the potential for nuisance conflicts is lower.
- Permit by right activities of a certain scale in a given zone. For instance, make smaller community gardens and urban farms a permitted use in residential districts, while larger operations are permitted in industrial and manufacturing districts. The same could be accomplished with respect to the number of animals in a given district.
- Develop aesthetic standards for urban agricultural uses. By establishing uniform expectations for garden construction and animal pens, the city can further mitigate neighborhood fears of unsightliness and incompatibility. This can also develop neighborhood cohesion and sense of character.
- Create a separate agricultural district as a distinct zone or as an overlay. The city of Madison is in the process of approving an ordinance to that effect. This further helps neighbors and farmers understand the range of possibilities within a given area.

Land Trusts and Conservation Easements

- Make investment in urban green areas a priority in their conservation strategies. All agricultural spaces, rural or urban, are productive and are deserving of conservation.
- Extend the state-run PACE program and similar initiatives to urban agricultural operations like community gardens and CSA farms. Eliminate the requirement that eligible lands be located in a farmland preservation area.
- Similarly, make urban agriculture operations beneficiaries of the Knowles-Nelson Stewardship Program.
- Instead of running a piecemeal, case-by-case approach to easement purchases, cities should adopt explicit plans that target urban lands for agricultural preservation. The Town of Dunn in Dane county has such a program that receives national acclaim.

In the end, all is not lost for the would-be urban farmer. Wisconsin and its municipalities are often at the center of progress and they consistently set trends that the rest of the nation follows. There is promise in the language and actions of city plans, zoning codes, and preservation activities. The atmosphere is certainly curious, and

communities are willing to experiment and try their hands at larger urban agricultural initiatives. However, there is not unified action, and there is much uncertainty in the urban landscape. By heeding the observations of the survey, incorporating these suggestions, and keeping a finger on the pulse of the community, Wisconsin can continue to grow the urban agricultural movement and foster more sustainable and food secure cities.