



Community Food Production

The Role of Local Governments in Increasing Community Food Production for Local Markets



Photo by Kimberley Hodgson.

As more communities learn about the many economic, ecological, social, and health benefits of community food systems, interest in community food production and consumption has increased. Though local governments are not typically involved directly in food production, they have important roles to play in increasing community food production by doing what they can to support the practice of farming within their jurisdictions. Food production encompasses all efforts to grow, raise, and harvest crops; raise animals; fish, hunt, or forage food; and process those products for human consumption. This Planning and Policy Brief provides an overview of the barriers and constraints to community food production for local markets, and the various local government strategies that can be used to ensure that regulatory, economic, and policy climates support and promote food production; create more “farm friendly” environments; *and* grow the next generation of farmers. Increasing the production of food for local markets, both to meet market demand and to provide the attendant community benefits, should be a key consideration in local governments’ food systems development efforts.

BACKGROUND

Local markets are hungry for food grown or produced locally. Recent numbers show significant growth in the direct sale of foods from producers to consumers. Whereas the 2012 Census of Agriculture showed that 144,530 farms made \$1.3 billion through direct-to-consumer sales in 2012, the 2015 Local Food Marketing Practices Survey recorded \$3.0 billion in direct-to-consumer sales, along with \$2.4 billion more in direct-to-retail sales and an additional \$3.4 billion in institutional or local intermediary direct sales, by 167,009 U.S. farms.¹ The doubling in value of direct-to-consumer sales alone alongside a less than 15 percent increase in the number of farms reporting these sales suggests the potential value in expanding food production and sales among existing farms, which can also provide an entry point to new and beginning farmers.²

However, the vast majority of food consumed by community residents is not produced locally but is grown and imported from elsewhere. Currently, a substantial gap exists between the amount of food produced locally and the need for such food. For example, a study of the Buffalo, New York, region shows that current farming output would only meet 38 percent of the local population’s demand for fruits and vegetables based on recommended serving sizes.³ U.S. Census of Agriculture data shows that only 7.8 percent of the country’s more than 2 million farms reported selling foods locally in 2012. Most of these farms – 85 percent – were very small, with gross cash farm income below \$75,000, highlighting the significance of local markets to supporting the viability of smaller farms. However, the five percent of local food farms with gross cash farm income



above \$350,000 accounted for 67 percent of local food sales, indicating the importance of larger farms in producing food crops for local consumption.⁴

CHALLENGES TO COMMUNITY FOOD PRODUCTION

Local governments must address many challenges to increasing food production within and around their jurisdictions. Farmers and food businesses face barriers to food production and sales, several of which relate to land use or economic development and are relevant to policy and regulatory decision-making at local levels of government.

In urban or urbanizing areas, *zoning regulations* often restrict, if not prohibit, the use of land for food production, processing, or sale.⁵ Confusion created by widely different provisions from one jurisdiction to the next, unclear language, and incomplete approaches can also be a significant barrier to food-producing uses and activities.⁶ The Local Food Marketing Practices Survey found that more than half of farms selling food to local markets were located in metropolitan counties and two-thirds of direct food sales came from farms in those counties.⁷ The ability to grow, process, and sell local food in these metropolitan areas is especially important to enable the continued development of a new generation of small farms that market their crops directly to urban consumers and businesses. These farms form an important component of emerging community food systems in many metropolitan areas.⁸ Likewise, zoning can place unnecessary restrictions or constraints on the establishment or expansion of farming activities and diversification of agricultural enterprises in urban and rural areas, and relief from these regulatory constraints is important for promoting continued agricultural activity and strengthening the local farming economy.^{9,10}

Farmland availability and access are primary barriers for many farmers and ranchers, especially young and beginning producers who do not come from farming backgrounds. As discussed in the Growing Food Connections (GFC) Planning & Policy Brief **Farmland Protection**, high start-up costs and access to suitable land to purchase or rent are the two major obstacles facing beginning farmers.¹¹ Another challenge to community food production is ensuring that there are enough farmers to grow food for local consumption. The U.S. has seen a decline in the numbers of both young and beginning farmers: the 2012 Census of Agriculture showed that only six percent of U.S. farmers were less than 35 years old, and the number of new farmers decreased by 20 percent between 2007 and 2012.¹²

PROMISING PRACTICES

Local governments have important roles to play in supporting increased food production to further strengthen economic activity and increase access to healthy, foods for all residents. These include roles in providing incentives for increasing food production, eliminating regulatory barriers to farming, making public lands available for food production, and offering training and support for new farmers. Local governments also have impor-

tant roles to play in creating “farm-friendly” environments by enacting plans, policies, and programs that support the viability of both existing and new agricultural activities and producers within their communities.

A national survey of planners by Growing Food Connections and the American Planning Association found that in some cases, food issues are addressed and strengthened in comprehensive, land-use, agricultural, and sustainability plans.¹³ However, about 75 percent of survey respondents reported that they have zero to minimal engagement in food systems planning in their current positions, so there is much more work that planners can be doing to support food systems development in their communities.¹⁴ The strategies and tools below are a good start.

Supporting Community Food Production

There are a number of policies and actions that local governments can explore to help increase food production within their jurisdictions by making it easier to grow food, making more land available to grow food on, and getting more producers engaged in growing food.

Policies and Plans to Increase Community Food Production

Local governments should establish a strong policy base for increasing food production by both farmers and residents through plans and policies. Plans and action items to support this goal typically address converting underutilized land, city-owned or private, into food production; amending land use regulations to remove barriers to agricultural uses and to incorporate food production into site design and landscaping; encouraging the use and development of structures and infrastructure to grow, process, store, and distribute food; and providing training and educational opportunities for farmers, entrepreneurs, and residents to help encourage increased food production.

There are many examples of food action plans and comprehensive plan elements that establish increasing food production as a goal. See the sidebar below for sample language from the **Multnomah Food Action Plan** (2010) from Multnomah County, Oregon; the **Local Food Supply Plan** (2013) from Marquette County, Michigan; the Chocoley Township, Michigan **Master Plan** (2015); and Seattle’s **Food Action Plan** (2012). These plans provide a wide range of goals, policies, strategies, and actions to support and promote community food systems, many of which address increasing the local food supply. In King County, Washington, the 2015 **Local Food Initiative** establishes targets of adding 400 net new acres in food production and 25 new farmers per year each year for ten years.¹⁵ Additional plan and policy examples are available in the **Growing Food Connections Local Government Food Policy Database**.

Commissioning Policy Studies

Local governments can also create task forces or other special committees to study their food production sectors and develop recommendations for strengthening their viability and increasing food production. In 2008, the mayor of San Francisco convened 50 city and county leaders to create a set of



Sample Plan and Policy Language for Increasing Community Food Production

Multnomah Food Action Plan, Multnomah County, Oregon

LOCAL FOOD: INCREASE VIABLE LOCAL OPTIONS IN OUR FOOD SYSTEM

- Goal 3: Increase Urban Food Production
 - 3.2 Convert underutilized land into food production
 - 3.3 Fund opportunities for urban food production

Local Food Supply Plan, Marquette County, Michigan

GOALS

- The economy in Marquette County improves through the increase in local production, processing, and consumption of food.
- Marquette County is an example to its citizens, and to other units of government, of how to use land to increase food supply.

POLICIES

- Encourage the establishment of food processing facilities including meat and frozen produce.
- Encourage the establishment of season extension facilities, such as hoop houses and controlled environment agriculture.
- Encourage the amendment of zoning ordinances to permit small scale agricultural activities in residential areas including food retail.
- Encourage the amendment of zoning ordinances to permit medium and large scale agriculture practices where appropriate.
- Support the establishment of community gardens that are accessible to all.
- Support educational opportunities that teach farming.
- Support land-leasing and sharing opportunities for use as farm incubators.
- Identify land on the “outskirts” of urban areas for possible next-generation farms.
- Encourage cooperatives for farming equipment

Master Plan, Chocolay Township, Michigan

POLICY STATEMENT 6: STRENGTHEN LOCAL FOOD SYSTEMS

Recognizing the relationship of local food systems to public health and a vibrant economy, the Township will take action to strengthen and improve the local food system at all levels, from food production in residential yards, to small organic farms, to larger traditional family farms, to industrial farms, with particular attention on increasing the availability of local value-added products.

REGULATORY TASKS: FOOD SYSTEMS

- Strategy FS-2. Amend regulations to support local food systems by increasing opportunities for context-sensitive production, processing, marketing, distribution, and waste processing in more areas of the Township.



- Strategy FS-2.2. Amend the zoning ordinance to increase production opportunities by implementing regulations to encourage the preservation of prime farm lands for primary agriculture use, and the preservation of high quality fish and wildlife habitat primarily for fishing and hunting.
- Strategy FS-2.3. Amend the zoning ordinance to allow agriculture as a permitted use in the Municipal Properties district to support agriculture as an interim use of publicly-owned lands.

CAPITAL PROJECTS: FOOD SYSTEMS

- Strategy FS-1.4. Support appropriate projects, facilities, and partnerships that increase production capacity and lengthen the growing season within the community, such as community gardens or farms, public food forests and upick areas, edible landscaping in public areas, community hoop houses, and hydroponic or aquaculture facilities.
- Strategy FS-1.8. Consider leasing Township-owned land to non-profit or community partners to support the local food system where appropriate, such as implementing projects to train new farmers, engage children and youth in growing their own food, or establish and maintain public food forests or gardens, etc.

Seattle Food Action Plan, Seattle, WA

Grow Local Goal: It should be easy to grow food in Seattle and in our region, for personal use and for business purposes.

Strategy 1. Prioritize food production as a use of land.

- Integrate policies supportive of urban agriculture into City of Seattle plans and efforts.
- Working within the City's property database, develop additional site criteria to more readily identify vacant or underused parcels suitable for urban agriculture.

Strategy 2. Develop and support programs to produce food on City-owned land.

- Support and expand the P-Patch community gardening and market gardening programs, focusing on meeting the needs of all residents interested in growing food in a P-Patch.
- Improve management and harvesting of fruits and berries on existing City-owned property.
- Where appropriate, consider leasing City-owned land to nonprofit community partners to support community goals and produce food for the community.
- Lease underutilized City-owned land to urban farmers through the Seattle Farms program.

Strategy 3. Support efforts to expand urban food production on privately owned land, including residential, commercial, and institutional properties.

- Encourage continued use of the competitive Department of Neighborhoods Neighborhood Matching Fund to develop and fund innovative community-based food production projects.
- Encourage new developments to include garden or agricultural land through the Seattle Green Factor and Priority Green Permitting.
- Include a fruit tree option in Trees for Neighborhoods, a project of Seattle reLeaf, to promote food production on residential property.

Strategy 4. Explore opportunities to expand rooftop and building integrated agriculture.

- Explore opportunities to expand rooftop and building integrated agriculture.

Strategy 5. Work jointly with other jurisdictions to conserve agricultural land.

- Continue to support Seattle's role in conserving regional agricultural land through transferring development rights from farmland to urban areas.
- Explore innovative ways in which Seattle can help to protect regional farmland.

King County Local Food Initiative, King County, WA

Target 1: Production



- Target 1A: Add 400 net new acres in food production per year in King County (2 percent per year) for the next 10 years.
- Target 1B: Increase the number of new and beginning farmers in food production in King County by 25 new farmers per year.
 - Strategy 1.1: Decrease start-up and expansion costs and remove barriers in food production (land, equipment, related infrastructure, taxes, insurance, capital investment).
 - Strategy 1.2: Improve farmland productivity.
 - Strategy 1.3: Enhance recruiting, training, and technical assistance programs for new farmers, with consideration of diverse cultural and language needs.
 - Strategy 1.4: Preserve farmland for food production, building on the recommendations of the King County Farms and Food Roundtable.

recommendations for an urban-rural collaboration on creating a regional foodshed.¹⁶ One of the **Urban-Rural Roundtable's** final six recommendations was to develop a regional Agricultural Resources Sustainability Strategy to “realize the full potential of remaining farmlands in the 16-county greater Bay Area to grow sustainably-produced food specifically for local markets”: inventorying local farmland, identifying the best opportunities to convert it to value-added food production, and funding that transformation.¹⁷ The group also discussed the idea of creating a citywide mega-Community Supported Agriculture (CSA) project that would deliver food from regional farms and city-based food producers to residents of all income levels, including subsidized boxes for low-income residents and seniors.¹⁸

Land-Use Regulations to Increase Food Production

A key action in promoting increased community food production is amending land-use regulations to remove barriers to or clarify language about agricultural uses and activities. Local governments should make sure that zoning codes and other ordinances support, not hinder, agricultural and food production and related activities on land in both urban *and* rural areas.

In urbanized areas, it is important to ensure that farming and food production uses are specified as allowable activities outside of agricultural districts. Urban agriculture ordinances should define different urban agricultural uses; identify the districts where community gardens, commercial gardens, and urban farms are allowed; establish permissions for accessory agricultural structures such as greenhouses, hoop houses, compost bins, and toolsheds; provide permissions and standards for livestock such as chickens and bees; and provide permissions and standards for farmstands and farmers markets.¹⁹ Local codes should also define and allow additional food system infrastructure uses such as community kitchens, kitchen incubators, and food processing facilities in commercial, industrial, and other appropriate districts to further support food production. Besides allowing for the creation of value-added food products with greater market value, food processing can extend the shelf life

of fresh produce and provides a use for “seconds,” or cosmetically imperfect produce, that might otherwise be discarded as unsellable.²⁰

Many jurisdictions have now adopted ordinances allowing community gardens, market gardens, urban farms, and accessory agricultural uses and structures throughout their communities, including within residential districts. Madison, Wisconsin’s district allows community gardens, beekeeping, market gardens, mobile groceries, composting, and farmstands by right; uses such as animal husbandry and farmers markets require conditional use approval.²¹ Atlanta passed an urban agriculture ordinance establishing “urban gardens” (no on-site sales) and “market gardens” (on-site sales permitted) as accessory or principal uses throughout the city; the use of agricultural structures and machinery in both is expressly allowed.²² Starting in 2007, Cleveland passed a **suite of zoning amendments** that enable food production throughout the city, including an urban garden district which allows the city to reserve land for garden use, including market gardens with on-site sales; chicken and bee zoning to allow residents to keep chickens, ducks, rabbits, and beehives in backyards and vacant lots, as well as larger animals like pigs, goats, and sheep on larger land areas; provisions permitting agriculture as a principal use on vacant residential lots and farmstands as conditional uses in residential districts; and an urban agriculture overlay district that allows the city to designate certain areas for larger-scale farming activities, including livestock production.²³

Minneapolis adopted **zoning amendments** in 2012 that define and establish use permissions and standards for community gardens, market gardens, and urban farms in residential, commercial, downtown, and industrial districts; they also enumerated permitted accessory agricultural uses and structures, including animal coops and pens, aquaponics systems, cold frames, and hoop houses.²⁴ San Francisco’s **urban agriculture ordinance** permits “neighborhood agriculture,” defined as principal or accessory community gardens and farms of less than one acre, in all zoning districts by right; “large-scale urban



agriculture” on sites larger than one acre require conditional use approval in residential districts.²⁵ Seattle amended its land code in 2010 to expand opportunities for urban agriculture by increasing options for growing and selling food in all districts. The **code** defines five urban agriculture uses – animal husbandry, aquaculture, community gardens, horticulture, and urban farms – and specifies where these uses are allowed by right or with conditional use approval.²⁶

Many communities have established restrictions on livestock ownership, especially where residential development has expanded into traditionally agricultural areas. Such ordinances may place limitations on the number of animals per acre, set minimum acreage sizes for animal keeping, prohibit certain types of animals, or impose special permit requirements or blanket prohibitions on livestock raising. They place unnecessary burdens on farmers, fail to take into account farm management practices, and can cause confusion among officials not familiar with livestock management issues. In order to create a regulatory environment that protects public health while supporting agricultural activity, local zoning regulations should focus on site suitability, reasonable setbacks, and generally accepted agricultural practices rather than acreage needs or animal number restrictions, and local governments should refer to state definitions, standards, and requirements created by agricultural experts rather than trying to come up with their own potentially inconsistent or unnecessarily restrictive versions.²⁷

On lands where growing crops and raising livestock is allowed, expansion of food production and farm growth can be constrained by restrictions on agriculturally related uses such as storage, processing, distribution, and marketing facilities. Local governments can amend their zoning ordinances to make it easier for farmers to expand and diversify their food production. Examples include Sonoma County, California, which adopted an **ordinance** to allow small-scale food processing facilities along with on-farm retail in agricultural and rural districts with administrative approval of a simple, low-cost zoning permit.²⁸ In Orange County, North Carolina, the Agricultural Support Enterprise floating zone district allows agriculturally related activities such as private and community agricultural processing facilities, cold storage facilities, farmers markets and farmstands, microbreweries and wineries, and community and regional meat processing facilities.²⁹ Zoning ordinances can also be amended to allow the development of agriculturally related businesses to better support the local farm economy. Scott County, Iowa’s ACS-F Agricultural Commercial Service Floating District is designed to serve the agricultural community by allowing commercial services in agricultural areas such as feed mixing services, seed sales, grain handling operations, fertilizer and pesticide retail outlets, large animal veterinary clinics, livestock transfer and sales facilities, and agricultural commodity local transportation services.³⁰

Another approach to easing the regulatory burdens on farmland is to exempt active farming activities from compliance with certain zoning and building standards. One such example is Scott County, Iowa, which includes a Farm Exemption (Section 6-4) in its **zoning code** stating that farm land, farm houses, farm



Full Circle Farm, King County, WA. Photo by Kimberley Hodgson.

barns, farm outbuildings, or other buildings or structures used for agricultural purposes are exempted from compliance with the code, though they are still subject to floodplain regulations.³¹ The county’s **comprehensive plan** provides criteria for determining when land and buildings qualify for the exemption, with the stated purpose of protecting and preserving prime farmland and farming operations.³² In Buffalo Grove, Illinois, the **zoning code** does not impose regulations or require permits for land and buildings or structures used for agricultural purposes, with the exception of requiring buildings to comply with setback lines; however, zoning restrictions do apply if the land ceases to be used solely for agricultural purposes.³³

Incentives for Increasing Community Food Production

Beyond making it possible to grow food and expand farming enterprises through eliminating land-use regulatory barriers, jurisdictions can actively incentivize the use of land for farming and food production. The City and County of San Francisco has established an **Urban Agriculture Incentive Zone** in which property owners that enter into a contract with the city to dedicate a site for agricultural use that has a public benefit (e.g., education, community garden, or food donations) become eligible for reduced property tax rates.³⁴ Woodbury County, Iowa, adopted an **Organics Conversion Policy** in 2005 that grants up to \$50,000 each year in property tax rebate incentives for converting farmland from conventional to organic techniques; importantly, it also applies to bringing dormant land into organic crop production.³⁵ In 2014, Washington, D.C., adopted the **Urban Farming and Food Security Act of 2014**, which created a tax incentive abating 90 percent of property taxes on land within the city used for urban farming or community garden purposes. To also tackle food insecurity, the Act created a tax credit of up to \$2,500 for foods grown on urban farms or community gardens within the city and then donated to a food bank or shelter.³⁶ Howard County, Maryland, offers funding of up to



\$10,000 through its **Agricultural Innovation Grant program** to encourage local farmers to expand or diversify their farming operations.³⁷

Using Public Lands for Community Food Production

Enabling and encouraging the use of private land for food production is important, but local governments can also take steps to make underutilized public lands available for food production as well. This can happen at a range of different scales. On the smaller end of the spectrum are examples such as the Homegrown Minneapolis initiative's **Garden Lease Program**, which designates more than 100 vacant city-owned lots for one- to five-year leases for community gardens, market gardens, and urban farms.³⁸ In Lawrence, Kansas, the **Common Ground Program** is a city-run community gardening and urban agriculture program that transforms vacant or under-utilized city properties into food production sites that further benefit the community through educational opportunities and donations to local food pantries.³⁹ In 2015, the program included 10 gardens that produced more than \$54,000 in market produce and 1,900 pounds of donated food.⁴⁰ In Multnomah County, Oregon, the offices of Sustainability and Tax Title partnered in the creation of the **County Digs Program**, which transfers tax-foreclosed properties to local governments and nonprofits for use as community gardens or urban farms; six community gardens have been created through the program.⁴¹

On a larger scale encompassing commercial agricultural production, in Colorado the **Boulder County Parks and Open Space Department** manages approximately 25,000 acres of agricultural land, 15,100 acres of which are cropland leased to local farmers and ranchers. The county manages 120 leases with 70 tenant farmers, which bring in \$1.1 to 1.3 million in revenue each year. Its **cropland policy** prioritizes sustainable, organic production methods and food crop production for local markets.⁴² In Utah's Salt Lake County, the **SLCO Urban Farming** initiative makes county-owned lands available for food production through a "Parks for Produce" community garden program and a Commercial Farming Program. In the latter, currently unused publicly owned land may be leased for a three-year period to farmers raising food crops for local sale.⁴³ In 2014, commercial farms produced more than 100,000 pounds of food from 15 acres of leased county land, and the Parks for Produce program served 119 families, including 24 refugee families.⁴⁴ In Sonoma County, California, the County Lands for Food Production (CLFP) initiative inventoried county lands suitable for farming and performed detailed **assessments** of grazing or row-cropping feasibility for sixteen sites. Within the county, more than 4,500 acres of county-owned land are currently leased to local farmers and ranchers.⁴⁵

Supporting New Farmer Training and Development

Increasing food production requires increasing the number of farmers and food producers in local communities. A number of jurisdictions have developed and supported programs that help new and beginning farmers. In Cabarrus County, North Carolina, after a community planning process identified the need for a farm incubator to help grow new farmers, the local govern-

ment worked with North Carolina Cooperative Extension to develop the **Elma C. Lomax Incubator Farm**, host to a beginning farmer training program offering business assistance and hands-on experience. In 2014, following budget cuts, the County transferred management of the farm to the Carolina Farms Stewardship Association.^{46,47} In 2010, Multnomah County in partnership with Oregon State University Extension created and managed the **Beginner Urban Farmer Apprenticeship (BUFA)** program, an 8-month program designed to help aspiring urban farmers and community land stewards break into the field of sustainable small-scale urban farming. The hands-on portion of the program is held at the county-owned **County CROPS** farm, which raises produce for donation to local charities. The program is now managed by Extension and its project partners.^{48,49} In Lawrence, Kansas, the Common Ground Program mentioned above includes an incubator farm site where four small vegetable farm businesses are getting their start.⁵⁰

As described in the GFC Planning and Policy brief **Community Food Systems and Economic Development**, local governments can also offer additional resources and assistance to help new farmers start new farms and existing farmers expand and diversify existing farms. Two examples of county programs that assist with everything from zoning and permitting issues to farmland access and business development are the **Agricultural Marketing Program** at Maryland's Howard County Economic Development Corporation and **Farm King County** in Washington State.

Creating A "Farm Friendly" Environment

Besides plans, policies, and actions that specifically target increasing food production by bringing new land into production, expanding existing operations, or bringing new farmers into the field, there are a number of strategies local governments can use to more generally create "farm friendly" environments. These include programs and regulations that protect, sanction, and support agricultural activities.

Agricultural Commissions and Ombudsmen

Some local governments have created agricultural commissions, formal or informal advisory boards that represent, support, protect, and promote local agriculture and farmers. They may focus on farmland preservation, propose or help review regulatory changes that affect farmland, offer marketing support to local farms, or mediate farm-neighbor disputes.⁵¹ In Massachusetts, agricultural commissions (AgComs) are created by a Town Meeting vote and appointed by the governing body; as of 2015, there were 165 AgComs in the state. One example is the **Ashfield Agricultural Commission**, which has established a town agricultural preservation fund, helped draft the town's right-to-farm bylaw and a grievance resolution protocol to settle farm-neighbor disputes, and won a marketing grant to help showcase the town's farming activities.⁵² In Durham, Connecticut, the **agriculture commission** is charged with supporting a balance of agricultural and other land uses, recommending changes to local regulations regarding agriculture and advising town boards and departments regarding impacts of proposed policies on local farms, and helping identify opportunities to



expand farming activities and support the economic viability of farming in the town.⁵³ The Durham, New Hampshire, **agricultural commission** created a “food friendly yard” signage program for town residents to raise awareness about and support home food production, and wrote a new Agricultural Resources chapter for the town’s master plan update in 2013.⁵⁴

In California, several local governments have hired agricultural ombudsmen to help farmers navigate complex regulatory processes and take advantage of opportunities and incentives. In Solano and Yolo Counties, the “farmbudsman” program established in 2013 had already had positive impacts on local farm viability by 2015: a 20 percent increase in approvals of agriculture-related projects, 500 new agriculture-related jobs, and 5 new food processors.⁵⁵

Voluntary Agricultural District Programs

Sixteen states have authorized the creation of voluntary agricultural district programs: special land-use protections and financial incentives for working agricultural lands that seek to protect agricultural resources, increase agricultural viability, and create secure climates for agriculture.⁵⁶ In 1985, through what is now the Agricultural Development and Farmland Preservation Act, the North Carolina General Assembly authorized the creation of **Voluntary Agricultural Districts** (VAD) to be implemented at the local level. Landowners may apply to enroll qualifying farmland in a VAD for a 10-year period but may withdraw from the program at any time. In exchange for signing a conservation agreement protecting the land from development, they receive benefits including waivers of water and sewer assessments, public hearings before condemnation of enrolled farmland, and increased protections from nuisance suits through noticing requirements. These ordinances also establish local agricultural advisory boards to administer the programs.⁵⁷ In 2005 the state amended its statutes to add an Enhanced Voluntary Agricultural District option; in exchange for signing an irrevocable 10-year conservation agreement, thus waiving the right to exit the program at any time within that period, the landowner is eligible for additional financial benefits.⁵⁸ As of December 2015, 87 of the state’s 100 counties had passed VAD ordinances, with 27 enabling Enhanced VAD programs.⁵⁹

In New York State, Article 25-AA of the Agriculture and Markets Law allows local landowners to petition for the creation of **local agricultural districts** to help improve farm viability, therefore maintaining land in active agricultural use.⁶⁰ Landowners who enroll their farmland within a district receive a combination of incentives and benefits, including eligibility for agricultural property tax assessment rates and protections from restrictive local laws and nuisance complaints.⁶¹ As of 2016, 53 of the state’s 62 counties are home to 210 agricultural districts, encompassing 8.8 million acres (including 6.3 million acres of farmland) on 25,600 farms.⁶² In Ohio, the state’s 2005 **Agricultural Security Area program** law allows eligible landowners to enroll at least 500 acres of contiguous farmland in an Agricultural Security Area (ASA) for a 10-year period. The local government agrees not to approve or finance new residential, commercial, or industrial development (including construction of new roads or utility infrastructure) within the ASA, and the landowners agree

Community Guide to Planning for Agriculture and Food Systems

As part of the Growing Food Connections project, the American Farmland Trust has developed a new resource, **Growing Local: A Community Guide to Planning for Agriculture and Food Systems**. The Guide explains the importance of planning for agriculture and food systems, defines key food systems planning terms, establishes important principles and practices for food systems planning and policy making, and provides an extensive implementation toolbox to help achieve food systems goals. The Guide together with the Planning and Policy Briefs series offer helpful guidance for planners and local governments seeking to strengthen their community food systems.

to only engage in agricultural activities and development.⁶³ As of 2014, more than 32,000 acres in 41 ASAs had been protected.⁶⁴ Local governments should be sure to take advantage of these enabled programs where possible.

Right-to-Farm Regulations

In rural areas, right-to-farm ordinances protect farmers and ranchers from nuisance lawsuits filed by new neighbors trying to stop agricultural operations. All fifty states have enacted such laws, though content varies from state to state, and local governments can reinforce these protections in their local land use codes.⁶⁵ In California, Napa County’s **right-to-farm ordinance** requires signed disclosure statements for transfers of agricultural land stating that agricultural operations are the highest and best use for the land and “inconveniences or discomforts” arising from such use will not be considered a nuisance.⁶⁶ Alameda County’s **farming rights ordinance** requires right-to-farm deed restrictions as a condition of approval for any discretionary development permit for properties within 2,000 feet of agricultural land or operations.⁶⁷ In East Greenwich Township, New Jersey, the **right-to-farm ordinance** recognizes the right to farm for established throughout the township, regardless of zoning designation, and defines the right to farm as including the use of all farming equipment and procedures at all times (special regulations for intensive animal farming operations apply).⁶⁸

Setbacks and Agricultural Buffer Requirements

Right-to-farm regulations protect existing farming activities from nuisance suits, but zoning ordinances that establish setbacks and buffer requirements between new residential development and agricultural lands can help minimize land-use conflict and protect farming activities. In Powhatan County, Vir-



ginia, “farmland compatibility standards” require new non-agricultural development on land that abuts agriculturally zoned lands with ongoing agricultural operations to provide a 100-foot vegetated buffer along all property lines adjacent to agricultural uses to act as a physical barrier between farming activities and other uses.⁶⁹ Butte County, California, requires new residential structures located inside or within 300 feet of agricultural zones to maintain a 300-foot buffer distance to any property line abutting an agricultural zone (agricultural worker housing is exempt from this requirement).⁷⁰ In Sutter County, California, these required buffer distances vary based on the agricultural use: 50 feet from grazing lands, 300 feet from cropland, 500 feet from dairies, and 1,000 feet from slaughterhouses.⁷¹

Other Promising Practices

Protect Farmland

Without farmland no food can be grown, and once farms are subdivided and developed, that agricultural resource is gone forever. In the United States, nearly 40 acres of farmland is lost every hour.⁷² Local governments should make sure that planning, policy, and regulatory documents acknowledge farm-

land as an important local resource and prioritize agricultural activities on these lands, and consider adopting programmatic and financial approaches to protecting farmland for its continued use in food production. See GFC Planning and Policy Brief **Farmland Protection** for a focused look at this issue.

Grow Community Food System Infrastructure

Local governments can also indirectly support the expansion of food production by small and mid-scale farms by supporting the development of food system infrastructure. The aggregation, processing, marketing, and distribution services provided by food hubs and other food system infrastructure components work to expand markets and increase demand for locally produced foods, which can then drive a corresponding increase in supply.⁷³ In Cabarrus County, the local food assessment argued the need for expanding local livestock slaughtering capacity – and identified 69 small beef farmers in the county ideally suited to scale up production to take advantage of the new facilities and meet increasing demand.⁷⁴ More information on strategies to support the growth of community food system infrastructure can be found in the GFC Planning and Policy Brief **Food Aggregation, Processing, and Distribution**.



Photo by Kimberley Hodgson.



CONCLUSION

As local governments and planners work to strengthen and grow their community food economies, they must be sure to consider the basis of all food systems: the production of food. Though the public sector is typically not directly involved in food production, there are many ways in which policies and programs can help local farmers and food producers create new or expand existing farms and businesses, as well as make it easier for residents to access healthy, locally grown food or grow their own. This briefing paper provides a catalog of options for local governments seeking to increase food production within their jurisdictions and create more “farm friendly” environments as the basis for robust and vibrant community food systems.

METHOD

The information contained in this brief was gathered through Growing Food Connections’ Communities of Innovation research, research for *Growing Local: A Community Guide to Planning for Agriculture and Food Systems*, and additional research completed for the writing of this brief. For more information visit: <http://growingfoodconnections.org/research/communities-of-innovation/>.

ENDNOTES

- ¹USDA National Agriculture Statistics Service. 2016. “Direct Farm Sales of Food: Results from the 2015 Local Food Marketing Practices Survey.” *2012 Census of Agriculture Highlights*. www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/Local_Food/LocalFoodsMarketingPractices_Highlights.pdf
- ²Gary Matteson and Alan Hunt. 2012. *The Emergence of Retail Agriculture: Its Outlook, Capital Needs, and Role in Supporting Young, Beginning, and Small Farmers*. Prepared for the Farm Credit Council by Local Food Strategies. www.localfoodstrategies.com/Emergence%20of%20Retail%20Ag%20-%202012%20Revisions_for%20_web.pdf.
- ³Samina Raja, Jessica Hall, Travis Norton, Patrick Gooch, Subhashni Raj, Taylor Hawes, and Jennifer Whittaker. 2014. *Growing Together: Ensuring Healthy Food, Strong Farms, and a Prosperous Buffalo Niagara*. Food Systems Planning and Healthy Communities Lab and University at Buffalo Regional Institute, State University of New York at Buffalo, School of Architecture and Planning. www.farmlandinfo.org/sites/default/files/GrowingTogether_Final.pdf
- ⁴Sarah Low et al. 2015. *Trends in U.S. Local and Regional Food Systems*. AP-068, U.S. Department of Agriculture, Economic Research Service, January. www.ers.usda.gov/webdocs/publications/ap068/51173_ap068.pdf. This report used a definition of “local” based on market arrangements, including direct-to-consumer arrangements such as regional farmers’ markets, or direct-to-retail/foodservice arrangements such as farm sales to schools (p. iii).
- ⁵Jeffrey P. LeJava and Michael J. Goonan. 2012. “Cultivating Urban Agriculture—Addressing Land Use Barriers to Gardening and Farming in Cities.” *Real Estate Law Journal* 41(2): 216–45.
- ⁶UCLA Department of Urban Planning. 2013. *Cultivate L.A.: An Assessment of Urban Agriculture*. cultivatelosangeles.files.wordpress.com/2013/07/cultivate-l-a-an-assessment-of-urban-agriculture-in-los-angeles-county-june-11-2013.pdf
- ⁷USDA National Agriculture Statistics Service 2016.
- ⁸Patricia Inman. 2015. “Locally Produced Food: A Way to Grow More Food and the Economy.” *Policy Profiles* 15(2), Northern Illinois University Center for Governmental Studies. cgs.niu.edu/Policy_Profiles/policy-profile-v15n2-Locally-Produced-Food-A-Way-To-Grow-More-Food-And-The-Economy.pdf
- ⁹Vermont Agency of Agriculture, Food & Markets. 2015. *Agricultural Economic Development: Local Land Use Planning and Its Effect on Diversified On-Farm Enterprises*. agriculture.vermont.gov/sites/ag/files/pdf/land_use/Agricultural_Econ_Dev_AAFM_02172015.pdf
- ¹⁰New Hampshire Coalition for Sustaining Agriculture and UNH Cooperative Extension. 2015. “Is Your Town Farm-Friendly? A Checklist for Sustaining Rural Character.” *New Hampshire Town and City*, March/April. <https://www.nhmunicipal.org/Resources/ViewDocument/327>
- ¹¹Julia Freedgood and Jennifer Dempsey. 2014. *Cultivating the Next Generation: Resources and Policies to Help Beginning Farmers Succeed in Agriculture*. American Farmland Trust. www.farmlandinfo.org/sites/default/files/AFT_BF_08-27-2014lo_0.pdf
- ¹²USDA Census of Agriculture. 2014. “2012 Census Highlights: Farm Demographics – U.S. Farmers by Gender, Age, Race, Ethnicity, and More.” ACH 12-3. www.agcensus.usda.gov/Publications/2012/Online_Resources/Highlights/Farm_Demographics/
- ¹³Samina Raja, Subhashni Raj, and Bartholomew Roberts. Forthcoming. “The US Experience in Planning for Community Food Systems An Era of Advocacy, Awareness, and (Some) Learning.” In *Nourishing Communities: Sustainable food system transformation through theory, practice and policy*, A. Blay-Palmer, I. Knezevic, C. Levkoe, P. Mount and E. Nelson (Eds.). Toronto: University of Toronto Press.
- ¹⁴Samina Raja and Chunyuan Diao. 2016. “Community-Led Urban Agriculture Policy: A View from the United States.” *Urban Agriculture Magazine*, 31:18–24. www.ruaf.org/community-led-urban-agriculture-policy-making-view-united-states
- ¹⁵King County, Washington. 2015. *Local Food Initiative*. Target 1A: Production. <http://your.kingcounty.gov/dnrp/local-food/documents/2015-KC-Local-Food-Report.pdf>
- ¹⁶Roots of Change. n.d. “San Francisco Urban-Rural Roundtable.” www.rootsofchange.org/projects/san-francisco-urban-rural-roundtable/
- ¹⁷Roots of Change. 2009. *The Final Recommendations of the San Francisco Urban-Rural Roundtable*. Recommendation 4: Bay Area Agricultural



Resources Sustainability Strategy. www.rootsofchange.org/wp-content/uploads/URRT_SF_FINAL.pdf

¹⁸ Roots of Change. 2009. *The Final Recommendations of the San Francisco Urban-Rural Roundtable*. Addendum: Citywide Mega CSA Project. www.rootsofchange.org/wp-content/uploads/URRT_SF_FINAL.pdf

¹⁹ Chicago Metropolitan Agency for Planning. 2012. *Municipal Strategies to Support Local Food Systems: Including Local Food in Comprehensive Plans and Urban Agriculture Toolkit*. www.cmap.illinois.gov/documents/10180/10927/FY13-0029+LOCAL+FOOD+TOOLKIT_lowres.pdf/ac034661-e7a9-43b7-b375-6e98578f9e89

²⁰ Kristy SeBlonka and Anna Haines. 2014. "Planning and Zoning for Local Food System Processing and Distribution." Fact Sheet, October. University of Wisconsin-Stevens Point, Center for Land Use Education. www.uwsp.edu/cnr-ap/clue/Documents/Ag/FoodSystemInfrastructureFactSheetOctober2014.pdf

²¹ City of Madison (Wisconsin). 2016. *Zoning Code*. Table 28-G-1, Special District Uses, Section 28.093, Urban Agricultural District. www.municode.com/library/wi/madison/codes/code_of_ordinances?nodeId=Chapter%2028%20Zoning%20Code

²² City of Atlanta. 2016. *Land Development Code*. Section 16-29.001, Definitions - Application; part 83. www.municode.com/library/ga/atlanta/codes/code_of_ordinances?nodeId=PTIICOORANDECO_PT16ZO_CH29DE

²³ Cleveland Department of City Planning. "Cleveland's Zoning for Urban Agriculture and Green Space." <http://planning.city.cleveland.oh.us/zoning/pdf/AgricultureOpenSpaceSummary.pdf>

²⁴ City of Minneapolis. Urban Agriculture Zoning Code Text Amendment, Ordinance No. 2012-Or-016, 017, 018, 019, 020, 021, 022, 023, 024, 025, 026, 027. Growing Food Connections Local Government Food Policy Database. <http://growingfoodconnections.org/gfc-policy/urban-agriculture-zoning-code-text-amendment-ordinance-no-2012-or-016-017-018-019-020-021-022-023-024-025-026-027/>

²⁵ City of San Francisco. 2011. Urban Agriculture Zoning Ordinance No. 66-11. Growing Food Connections Local Government Food Policy Database. <http://growingfoodconnections.org/gfc-policy/urban-agriculture-zoning-ordinance-no-66-11/>

²⁶ Seattle Department of Construction and Inspections. 2010. "Urban Agriculture." *Seattle Permits*, Tip 244. www.seattle.gov/DPD/Publications/CAM/cam244.pdf

²⁷ Eastern Connecticut Resource Conservation and Development Area, Inc. 2012. *Guidance and Recommendations for Connecticut Municipal Zoning Regulations and Ordinances for Livestock*. www.farmlandinfo.org/sites/default/files/LivestockManual_6_20_12_1.pdf

²⁸ Sonoma County, California. 2014. *Ordinance No. 6081*. www.sonoma-county.org/prmd/docs/small_scale_ag/ord13-0004_6081_small_ag_processing_adopted_ordinance.pdf

²⁹ Orange County, North Carolina. 2015. *Code of Technical Ordinances: Unified Development Ordinance (UDO)*. Section 3.8.3.A; Table 5.2.3. www.orangecountync.gov/departments/planning_and_inspections/ordinances.php

³⁰ Scott County, Iowa. 2016. *Zoning Ordinance for Unincorporated Scott County*. Section 6-11, "ACS-F" Agriculture Commercial Service Floating District. www.scottcountyiowa.us/planning/pub/zoning/ordinance/Scott-County-Zoning-Ordinance.pdf

³¹ Scott County 2016, Section 6-4, Farm Exemptions. www.scottcountyiowa.us/planning/pub/zoning/ordinance/Scott-County-Zoning-Ordinance.pdf

³² Scott County, Iowa. 2008. *Comprehensive Plan*. Chapter 11, Addendum A: Criteria for determination of agricultural exemption to County Zoning Ordinance and Building Codes and explanation of farmsteads split in agricultural zoning districts. [www.scottcountyiowa.us/planning/pub/comp_plan/plan_complete/January_2008_Scott_County_Comprehensive_Plan_\(Complete_Copy\).pdf](http://www.scottcountyiowa.us/planning/pub/comp_plan/plan_complete/January_2008_Scott_County_Comprehensive_Plan_(Complete_Copy).pdf)

³³ Buffalo Grove, Illinois. 2017. *Code of Ordinances*. Title 17, Zoning; Section 17.20.100, Agricultural Exemptions. www.municode.com/library/il/buffalo_grove/codes/code_of_ordinances?nodeId=ITI17ZO_CH17_20GEPR_17_20.100AGEX

³⁴ City and County of San Francisco. 2014. Urban Agriculture Incentive Zone Ordinance No. 184-14. Growing Food Connections Local Government Food Policy Database. <http://growingfoodconnections.org/gfc-policy/urban-agriculture-incentive-zone-ordinance-no-184-14/>

³⁵ Woodbury County, Iowa. 2005. Resolution: Woodbury County Policy for Rural Economic Revitalization "Organics Conversion Policy." www.woodburycountyiowa.gov/attachments/article/42/Organics%20Conversion%20Policy.pdf

³⁶ Council of the District of Columbia. 2014. B20-0677: D.C. Urban Farming and Food Security Act of 2014. <http://lims.dccouncil.us/Legislation/B20-0677>

³⁷ Howard County (Maryland) Economic Development Corporation. "Farms & Agriculture: Grants and Financing." www.hceda.org/farms-agriculture/grants-and-financing.aspx

³⁸ City of Minneapolis. 2016. "Minneapolis Garden Lease Program." www.ci.minneapolis.mn.us/sustainability/homegrown/WCMSP-170166

³⁹ City of Lawrence, Kansas. "Sustainability Initiatives: Common Ground Program." www.lawrenceks.org/common_ground

⁴⁰ City of Lawrence, Kansas. 2015. Common Ground Community Garden: 2015 Program Highlights. <http://lawrenceks.org/assets/common-ground/2015-common-ground-program-highlights.pdf>

⁴¹ Multnomah County, Oregon, Office of Sustainability. "County Digs Program." <https://multco.us/multfood/county-digs-program>

⁴² Boulder County (Colorado) Board of County Commissioners. 2011. *Boulder County Parks and Open Space Cropland Policy*. www.boulder-county.org/doc/parks/croppolicy.pdf

⁴³ Salt Lake County, Utah. 2012. *Urban Farming Program Implementation Handbook*. http://slco.org/urbanfarming/doctopdf/Implementation_Handbook_NEW.pdf

⁴⁴ Salt Lake County Parks and Recreation. 2014. "Urban Farming Annual Report 2014." <http://slco.org/urbanfarming/pdfandWord/urbanFarmingAnnualReport.pdf>

⁴⁵ Lisa Bush. 2015. *Final Report: Sonoma County, County Lands for Food Production Phase 2*. <http://ucanr.edu/sites/BFRSOCO/files/210545.pdf>

⁴⁶ Cabarrus County, North Carolina. "Elma C. Lomax Incubator Farm." www.cabarruscounty.us/government/departments/sustainability/local%20food/Pages/Elma-C.-Lomax-Incubator-Farm.aspx

⁴⁷ Kimberley Hodgson. 2015. "Advancing Local Food Policy in Cabarrus County, North Carolina: Successes and Challenges in a Changing Political Climate." *Growing Food Connections Exploring Stories of Innovation*. <http://growingfoodconnections.org/comminnovat/advancing-local-food-policy-successes-and-challenges-in-a-changing-political-climate/>

⁴⁸ Multnomah County, Oregon. 2011. "Aspiring urban farmers can now apply for the Beginning Urban Farmer Apprenticeship program." <https://multco.us/multnomah-county-home/news/aspiring-urban-farmers-can-now-apply-beginning-urban-farmer>

⁴⁹ Oregon State University. 2016. "Small Farms: Beginning Urban Farmer Apprenticeship." <http://smallfarms.oregonstate.edu/beginning-farmers/BUFA>

⁵⁰ City of Lawrence, Kansas. "Sustainability Initiatives: Common Ground Program." www.lawrenceks.org/common_ground

⁵¹ Massachusetts Association of Agricultural Commissions. 2012. "About AgComs: Overview." www.massagcom.org/AgComsOverview.php

⁵² Town of Ashfield, Massachusetts. 2016. "Ashfield Agricultural Commission." <http://ashfield.org/regs/agriculture.html>

⁵³ Town of Durham, Connecticut. 2017. "Agriculture Commission." www.townofdurhamct.org/content/28562/27548/28022/default.aspx

⁵⁴ Town of Durham, New Hampshire. 2017. "Agricultural Commission." www.ci.durham.nh.us/boc_agricultural

⁵⁵ Solano County, California. 2015. "Farmbudsman Program." www.solanocounty.com/farmbudsman/home.asp

⁵⁶ Farmland Information Center. 2016. "Agricultural District Programs." *Fact Sheet*. Northampton, MA: American Farmland Trust. www.farmlandinfo.org/sites/default/files/Agricultural_District_Programs_AFT_FIC_2016.pdf

⁵⁷ North Carolina Department of Agriculture & Consumer Services. n.d. "North Carolina Agricultural Districts." www.ncadfp.org/documents/vadbro.pdf

⁵⁸ Southwestern NC Resource Conservation and Development Council. n.d. "Enhanced Farmland Protection for North Carolina Landowners." www.ncadfp.org/documents/EVADBrouchure.pdf



GROWING FOOD CONNECTIONS PARTNERSHIP

PROJECT LEAD



PROJECT CO-LEADS



cultivating
healthy
places



PROJECT PARTNERS



GROWING FOOD CONNECTIONS

Planning & Policy Brief, August 2017

AUTHORS

Ann Dilleuth, AICP, American Planning Association

SERIES EDITORS

Kimberley Hodgson, AICP, Cultivating Healthy Places
Samina Raja, University at Buffalo

CONTRIBUTORS

Kimberley Hodgson, Cultivating Healthy Places
Samina Raja, University at Buffalo
Julia Freedgood, American Farmland Trust
Jill Clark, Ohio State University

DESIGN & PRODUCTION

Brenda Stynes, University at Buffalo
Kimberley Hodgson, Cultivating Healthy Places

Recommended citation: Dilleuth, Ann. 2017. Community Food Production: The Role of Local Governments in Increasing Community Food Production for Local Markets. In Kimberley Hodgson and Samina Raja (Series Editors), Planning & Policy Briefs. Growing Food Connections. 12p. Available on-line at: growingfoodconnections.org.

⁵⁹ North Carolina Department of Agriculture & Consumer Services. 2015. "Voluntary Agricultural Districts." www.ncadfp.org/documents/VAD-Map12-29-15_000.pdf

⁶⁰ New York State Department of Agriculture and Markets. 2016. "New York's Agricultural Districts: Frequently Asked Questions." www.agriculture.ny.gov/ap/agsservices/Agricultural_Districts_FAQ.pdf

⁶¹ New York State Department of Agriculture and Markets. n.d. "Agricultural Districts." www.agriculture.ny.gov/ap/agsservices/agdistricts.html

⁶² New York State Department of Agriculture and Markets 2016.

⁶³ Ohio Department of Agriculture. 2013. "Agricultural Security Area (ASA) Program." www.agri.ohio.gov/divs/FarmLand/docs/Farm_ASA_FactSheet.pdf

⁶⁴ Ohio Department of Agriculture. 2014. "Agricultural Security Areas." www.agri.ohio.gov/divs/FarmLand/docs/Farm_ASA_CurrentASAList.pdf

⁶⁵ Kyle Weldon and Elizabeth Rumley. n.d. "States' Right-to-Farm Statutes." National Agricultural Law Center. nationalaglawcenter.org/state-compilations/right-to-farm/

⁶⁶ Napa County, California. 2016. *Code of Ordinances*. Chapter 2.94, Agriculture and Right to Farm. www.municode.com/library/ca/napa_county/codes/code_of_ordinances?nodeId=TIT2ADPE_CH2.94AG-RIFA

⁶⁷ Alameda County, California. 2016. *Code of Ordinances*. Chapter 6.28, Farming Rights. www.municode.com/library/ca/alameda_county/codes/code_of_ordinances?nodeId=TIT6HESA_CH6.28FARI

⁶⁸ East Greenwich Township, New Jersey. 2016. *Code of Ordinances*. Section 16.58.050, Right to Farm. www.municode.com/library/nj/east_greenwich_township/codes/code_of_ordinances?nodeId=TIT16L-ADeco_CH16.58ZOESUSSTGE_16.58.050RIFA

⁶⁹ Powhatan County, Virginia. 2016. *Code of Ordinances*. Section 83-485, Farmland Compatibility Standards. www.municode.com/library/va/powhatan_county/codes/code_of_ordinances?nodeId=CO-CH83Zoor_ARTVIIIIDEST_S83-485FACOST

⁷⁰ Butte County, California. 2016. *Code of Ordinances*. Chapter 24, Article III, Division 7, Agricultural Buffers. www.municode.com/library/ca/butte_county/codes/code_of_ordinances?nodeId=CH24ZO_ARTIIIG-ERE_DIV7AGBU

⁷¹ Sutter County, California. 2016. *Zoning Code*. Part 4, Article 19, Agricultural Buffers. www.municode.com/library/ca/sutter_county/codes/code_of_ordinances?nodeId=n1500ZO_PT4GERE_ART19AGBU

⁷² American Farmland Trust. N.d. "Farmland." www.farmland.org/our-work/areas-of-focus/farmland

⁷³ Barham et al. 2012, pp. 4-5.

⁷⁴ Sybil Tate, 2012. "Local Foods as Economic Development – Cabarrus County." July 5. *Community and Economic Development in North Carolina and Beyond*, UNC School of Government. ced.sog.unc.edu/local-foods-as-economic-development-cabarrus-county/