

TOOLKIT

FOOD SYSTEM TOOLKIT FOR HAMPDEN AND HAMPSHIRE COUNTIES

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Toolkit: Agricultural Commission

AGRICULTURAL COMMISSION

What is an agricultural commission? A town agricultural commission is a standing committee of town government, created through a Town Meeting vote and is appointed by the Board of Selectmen or governing body of the town. It represents the farming community, encourages the pursuit of agriculture, promote agricultural business, agricultural economic development and protect farmlands and farm businesses, and preserve, revitalize and sustain agricultural businesses and land. In some communities they focus on farmland preservation efforts, while in others they review regulatory proposals developed by town boards

What does an Agricultural Commission do?

- Serves as a local voice by representing the farming community and advocating for farmers, farm businesses and farm interests
- Provides visibility for farming and encouraging the pursuit of agriculture, including promoting agricultural-base economic opportunities
- Works with other town boards about issues facing the town that affect agriculture
- Helps resolve farm related problems or conflicts
- Protects farmland and natural resources by preserving, revitalizing, and sustaining the communities' agricultural businesses and lands



Photo credit: Massachusetts Agricultural Commission. <http://www.massagcom.org/>

Why are town Agricultural Commissions formed?

Many towns trying to balance growth and quality of life issues are creating Agricultural Commissions. The intent of an Agricultural Commission is simple: protect agricultural lands, preserve rural character, provide a voice for farmers, and encourage agricultural based businesses.

Are Agricultural Commissions regulatory?

Unlike some other town committees, Agricultural Commissions do not operate under any regulatory authority from the Commonwealth. While town conservation commissions implement the State Wetlands Protection Act and planning boards enforce the local zoning code, Agricultural Commissions are created at Town Meeting to represent farming interests in the town-but they do not have any legal mandate or enforcement authority.

What do Agricultural Commissions do in Massachusetts?

- Adopt local right-to-farm by-laws
- Raise monies for farmland protection and economic development
- Start local farmer's markets
- Identify farmers' needs and community's needs, issues and concerns, and provide mediation and conflict resolution on farm related disputes within town

- Matching farmers with available land and helping the landowner and the farmer promote sustained use
- Collaborate with other town boards on development proposals
- Recommending actions on land use programs that would help agriculture thrive, including Chapter 61, tax valuation, APR and other preservation programs and right-to-farm by-laws
- Advocate at state and federal levels for support of community-identified agricultural needs
- Educate town residents about the value of agriculture in the community
- Seeking out informational and educational resources relevant to farms and farm communities
- Develop trust and a working relationship among farmers, residents and institutions
- Facilitate the technical, educational, business and regulatory assistance needed to farm and to live near farms
- Hold educational workshops on intergenerational transfer of property, Chapter 61 lands, farm viability, and Agricultural Preservation Restrictions
- Obtain technical assistance on nonpoint source pollution, conservation farm planning, manure management, environmental stewardship
- Map farm and farmlands
- Hosting community agricultural events

Getting started:

Steps towards getting an Agricultural Commission started in your town, as recommended by the Massachusetts Agricultural Commission:

1. Identify leaders and organizers
2. Assess interest. Talk to farmers, residents, boards and committees, and community decision makers.
3. Gather the support of farmers and town leadership.
4. Organize a public informational meeting.
5. Invite farmers through written letters of invitation, residents and the public through press releases and newspapers articles.
6. Request that members of established agricultural commissions speak about why they organized, what they do, and the benefits to agriculture.
7. Answer the questions: Is an agricultural commission important for our town? Do you think we should organize an agricultural commission in town?
8. Gain commitment from participants to serve on an agricultural commission steering committee.
9. Publicize newly established steering committee meetings.
10. Draft an agricultural commission by-law and town meeting warrant article with input from town boards and town counsel.
11. Research advocates and opposition.
12. Present articles at Town Meeting for discussion and vote. Presentation is provided by well informed and prepared advocates.

What happens after passage of the agricultural commission by-law?

1. Steering committee and town leadership work together to solicit applicants for agricultural commission members.
2. Steering committee reviews applications and makes recommendations to the Select Board.

3. Select Board appoints members, assigns terms of service, and establishes date for convening first meeting.
4. First meeting business:
 - Identify facilitator and recorder.
 - Review by-law, focus on mission, membership, terms of service, and vote in officers.
 - Chair convenes first meeting:
 - Note Roberts Rules of Order.
 - Identify Needs, Priorities.
 - Establish goals.
 - Begin development of work plan.
 - Implement Work Plan.
 - Guiding principle: Identify and work on achieving one or two measurable goals at a time...build success!

5. Seek Involvement from community through a Circle of Friends

Circle of Friends or Friends of Farmers

Agricultural Commission membership can leverage their resources by asking for help from others. Friends are people in the community (or connected to the community) that have skills and abilities that the Agricultural Commission needs to achieve their goals. A “friend” will be honored to assist if they are asked to volunteer time on a task that is focused, short term and achievable. Time volunteered by “friends” should be highly valued and respected.

Find more information about starting an Agricultural Commission in your town through additional resources available though the Massachusetts Agricultural Commissions website, available at: A Toolkit for Organizing an Agricultural Commission (<http://www.massagcom.org/resources/resources.html#toolkit>).

AGRICULTURAL COMMISSION MODEL BYLAW:

For the furtherance of the goals of this Bylaw, there is hereby established an Agricultural Commission, to consist of five (5) members, appointed by the Board of Selectmen, at least three of whom shall be representative of the Bolton farming community and one (1) from the non-farming, residential community. The term of appointment shall be for three (3) years, timed to coincide with the Town’s fiscal year. At the time said Commission is first appointed, one member shall be appointed for one (1) year, two members for a term of two (2) years, and two members for a term of three (3) years; all subsequent appointments shall be made for terms of three (3) years. The appointing authority shall fill any occurring vacancy based on the unexpired term being vacated.

The Agricultural Commission shall be authorized:

- To act as a spokesperson for the Town farming community;
- To present written or oral testimony in the context of public hearings before any Town Board or Committee;
- On its own initiative, to advise any Town Board or Committee on matters pertinent to the particular area of jurisdiction of that Board or Committee, insofar as the issue relates to the interests of agriculture;

- To advise the Board of Selectmen and/or any other Town Board on any Town-wide issues relating to agriculture which, in the opinion of the Agricultural Commission, require a concerted Town action or response;
- To respond to any request for information or advice from any Town Board or Committee;
- To provide public information or public education services regarding agriculture and the practice of agriculture in Town, or in general;
- To provide education and information for farmers in residential, areas on how to minimize their impact on their neighbors;
- To serve, at the written request of any Town Officer, Board, or Committee, as an arbitrator or negotiator in the resolution of disputes relating to agricultural issues, provided that no order or decision on the particular matter in question has already been issued by any Town entity legally authorized to do so; and that any resulting decision or recommendation shall be strictly advisory, and shall have no legal standing or definitive nature beyond the voluntary agreement of the parties to abide by it;
- To promote farming business and agriculture in Town, to create awareness through education, and the promotion of agriculture and it's benefits to Town.

The Agricultural Commission, per se, is specifically not authorized:

- To acquire or hold property, real or personal;
- To act as an agent or representative of any individual or entity in any matter pending before any Town or State agency;
- To interfere with, litigate, or serve in any way as a conduit, agent, or forum for appeals relating to any decision made by a legally authorized Town Officer or agency.

Toolkit: Agricultural District

AGRICULTURE DISTRICT MODEL

What is an agriculture district? Incorporating agricultural districts in Zoning Bylaws strives to protect the viability of agriculture in a region and is generally used by communities that are concerned about maintaining the economic viability of their agricultural industry. A carefully written agricultural zoning ordinance can prevent farmland from being converted to nonfarm uses, can prevent the fragmentation of farms, prevent land-use conflicts, and protect agricultural producers from nonfarm intrusion into agricultural areas as well as as vigorously as residential zoning can protect housing areas from commercial or industrial intrusions. A further consideration in agricultural zoning is the reduction or elimination of conflicts that arise between farm and nonfarm residents.

Section 1: Purpose and Intent

For the purpose of promoting public health, safety, morals, comfort and general welfare; to conserve and protect property and property values; to secure the most appropriate use of land; and to facilitate adequate but economical provisions of public improvements, all in accordance with a comprehensive plan, the voters of the zoned area finds it necessary and advisable to regulate sanitary drainage, the location, height, bulk, number of stories and sizes of buildings and other structures, including tents, cabins and trailer coaches, percentages of lot areas which may be occupied, set-back building lines, sizes of yards, courts and other open spaces, the density of populations, the uses of buildings and other structures including tenets, cabins and trailer coaches and the uses of land for trade, industry, residence, and recreation.

Section 2: Use Regulations

Uses permitted by right:

- All forms of agriculture , including horticulture, and animal husbandry, including necessary farm structures;
- Forestry uses, including sawmills;
- Farm dwellings;
- Production nurseries and production greenhouses;
- Wildlife refuges and fish hatcheries;
- Roadside stands for the sale of agricultural products, at least half of which are grown on the premises. Off-road parking shall be provided for all employees and customers and the stand shall be set back at least 20 feet from all property lines and road rights of way.
- Garages
- Signs pursuant to the local sign ordinance
- Beekeeping
- Manure storage facility
- Non-commercial recreation
- Home occupation
- Accessory apartment
- Single-family dwelling

Toolkit: Urban Garden District

URBAN GARDEN DISTRICT MODEL

What is an urban garden district? An “Urban Garden District” is established as part of the Zoning Code in a town or city to ensure that urban garden areas are appropriately located and protected to meet needs for local food production, community health, community education, garden-related job training, environmental enhancement, preservation of green space, and community enjoyment on sites for which urban gardens represent the highest and best use for the community. Various studies of urban gardens show relationships with crime reduction, economic development, increased property value, health benefits, and food security.

Section 1: Purpose and Intent

The “Urban Garden District” is hereby established as part of the Zoning Code to ensure that urban garden areas are appropriately located and protected to meet needs for local food production, community health, community education, garden-related job training, environmental enhancement, preservation of green space, and community enjoyment on sites for which urban gardens represent the highest and best use for the community.

Section 2: Definitions

The term “urban garden” and of its derivatives that shall include but not be limited to the following:

- “Community garden” means an area of land managed and maintained by a group of individuals to grow and harvest food crops and/or non-food, ornamental crops, such as flowers, for personal or group use, consumption or donation. Community gardens may be divided into separate plots for cultivation by one or more individuals or may be farmed collectively by members of the group and may include common areas maintained and used by group members.
- “Market garden” means an area of land managed and maintained by an individual or group of individuals to grow and harvest food crops and/or non-food, ornamental crops, such as flowers, to be sold for profit.
- “Greenhouse” means a building made of glass, plastic, or fiberglass in which plants are cultivated.
- “Hoop house” means a structure made of PVC piping or other material covered with translucent plastic, constructed in a “half-round” or “hoop” shape.
- “Cold frame” means an unheated outdoor structure consisting of a wooden or concrete frame and a top of glass or clear plastic, used for protecting seedlings and plants from the cold.

Section 3: Permitted Main Uses

Only the following main uses shall be permitted in an Urban Garden District:

- Community gardens which may have occasional sales of items grown at the site
- Market gardens, including the sale of crops produced on the site

Section 4: Permitted Accessory Uses

Only the following accessory uses and structures shall be permitted in an Urban Garden District:

- Greenhouses, hoop houses, cold frames, and similar structures used to extend the growing season
- Open space associated with and intended for use as garden areas

- Signs limited to identification, information and directional signs, including sponsorship information where the sponsorship information is clearly secondary to other permitted information on any particular sign, in conformance with the regulations of underlying zoning
- Benches, bike racks, raised/accessible planting beds, compost bins, picnic tables, seasonal farm stands, fences, garden art, rain barrel systems, chicken coops, beehives, and children's play areas
- Buildings, limited to tool sheds, shade pavilions, barns, rest-room facilities with composting toilets, and planting preparation houses, in conformance with building regulations and underlying zoning
- Off-street parking and walkways, in conformance with town regulations

Section 5: Supplemental Regulations

Uses and structures in an Urban Garden District shall be developed and maintained in accordance with the following regulations:

- Location. Buildings shall be set back from property lines of a Residential District a minimum distance of five (5) feet.
- Height. No building or other structure shall be greater than twenty-five (25) feet in height.
- Building Coverage. The combined area of all buildings, excluding greenhouses and hoop houses, shall not exceed fifteen percent (15%) of the garden site lot area.
- Parking and Walkways. Off-street parking shall be permitted only for those garden sites exceeding 15,000 square feet in lot area. Such parking shall be limited in size to ten percent (10%) of the garden site lot area and shall be either unpaved or surfaced with gravel or similar loose material or shall be paved with pervious paving material. Walkways shall be unpaved except as necessary to meet the needs of individuals with disabilities.
- Signs. Signs shall not exceed four (4) square feet in area per side and shall not exceed six (6) feet in height.
- Seasonal Farm Stands. Seasonal farm stands shall be removed from the premises or stored inside a building on the premises during that time of the year when the garden is not open for public use.
- Fences. Fences shall not exceed six (6) feet in height, shall be at least fifty percent (50%) open if they are taller than four (4) feet, and shall be constructed of wood, chain link, or ornamental metal. For any garden that is 15,000 square feet in area or greater and is in a location that is subject to design review and approval by the City Planning Commission or Landmarks Commission, no fence shall be installed without review by the City Planning Director, on behalf of the Commission, who may confer with a neighborhood design review committee. If one exists, so that best efforts are taken to ensure that the fence is compatible in appearance and placement with the character of nearby properties.

Toolkit: Right to Farm Bylaw

RIGHT TO FARM MODEL BYLAW

What is a Right to Farm bylaw? A Right to Farm bylaw is an important tool that can strengthen a community's efforts to protect the viability of farming. The intent of such a General Bylaw (not Zoning) is to reiterate the importance of -- and support for -- farming within the town. There is a notification provision that works to ensure that people moving into the community are aware that agriculture, and the associated sights, sounds, and smells, is an accepted and central economic and cultural activity. This type of bylaw seeks to prevent conflicts between farm operations and neighbors. There is a dispute resolution process for communities that have adopted an Agricultural Commission. It is strongly recommended that Agricultural Commissions are adopted even before enacting a Right to Farm bylaw, as such a commission can help tailor the bylaw and educate the public about the need for such a provision. This model has been approved by the Commonwealth's Attorney General.

Section 1: Legislative Purpose and Intent

The purpose and intent of this Bylaw/Ordinance is to state with emphasis the Right to Farm accorded to all citizens of the Commonwealth under Article 97, of the Constitution, and all state statutes and regulations thereunder including but not limited to Massachusetts General Laws Chapter 40A, Section 3, Paragraph 1; Chapter 90, Section 9, Chapter 111, Section 125A and Chapter 128 Section 1A. We the citizens of [City-Town] restate and republish these rights pursuant to the Town's authority conferred by Article 89 of the Articles of Amendment of the Massachusetts Constitution, ("Home Rule Amendment").



Photo credit: berkshirerealtors.com

This General Bylaw/Ordinance encourages the pursuit of agriculture, promotes agriculture-based economic opportunities, and protects farmlands within the Town/City of [NAME] by allowing agricultural uses and related activities to function with minimal conflict with abutters and local agencies. This By-law/Ordinance shall apply to all jurisdictional areas within the Town/City.

Section 2: Definitions

The term "farm" or agriculture or their derivatives that shall include but not be limited to the following for both agriculture-related educational and farm-base recreational activities, including agri-tourism:

- Farming in all its branches and tilling of the soil
- Dairying
- Production, cultivation, growing, and harvesting of any agricultural aquacultural, floricultural, viticultural, or horticultural commodities
- Growing and harvesting of forest products upon forest land, and any other forestry and lumbering operations
- Raising of livestock including horses
- Keeping horse as a commercial enterprise

- Keeping and raising of poultry, swine, cattle, ratites (such as emus, ostriches, and rheas) and camelids (such as llamas camels), and other domesticated animals for food and other agricultural purposes, including bees and fur-bearing animals.

“Farming” shall encompass activities including, but not limited to the following:

- Operation and transportation of wide, slow-moving farm equipment
- Control of pests, including (but not limited to), insects, weeds, predators and disease organism of plants and animals
- Application of manure, fertilizers and pesticides
- Conducting agriculture-related educational and farm-based recreational activities, including agri-tourism, provided that the activities are related to marketing the agricultural output or services of the farm
- Processing and packaging of the agricultural output of the farm and the operation of farmer’s market or farm stand including signage thereto
- Maintenance, repair, or storage of seasonal equipment, or apparatus owned or leased by the farm owner or manager used expressly for the purpose of propagation, processing, management, or sale of the agricultural products
- On-farm relocation of earth and the clearing of ground for farming purposes

Section 3: Right to Farm Declaration

The Right to Farm is hereby recognized to exist within the Town of [Farm-Town]. The above-described agricultural activities may occur on holidays, weekdays, and weekends by night or day and shall include the attendant incidental noise, odors, dust, and fumes associated with normally accepted agricultural practices. It is hereby determined that whatever impact may be caused to others through the normal practice of agriculture is more than offset by the benefits of farming to the neighborhood, community, and society in general. The benefits and protections of this By-law are intended to apply exclusively to those commercial agricultural and farming operations and activities conducted in accordance with generally accepted agricultural practices. Moreover, nothing in this Right to Farm Bylaw shall be deemed as acquiring any interest in land, or as imposing any land use regulation, which is properly the subject of state statute, regulation, or local zoning law.

Toolkit: Poultry Bylaws

POULTRY BYLAWS

Allowing chickens and hens by right or Special Permit in residential areas of communities increases local food security since they provide a source of fresh, local and cheap eggs and sometimes as a source of poultry meat. Some communities in Massachusetts and even in the Pioneer Valley have already adopted zoning regulations related to the housing and ownership of chickens and hens. These ordinances and bylaws set regulations such as for the number of chickens or hens allowed on one property (or per square footage/acreage), the size and setbacks of the enclosures for the animals, and what is done in the event that a public nuisance arises. Some of these communities additionally allow and regulate the keeping of livestock, rabbits and other farm animals, which can be taken into consideration when viewing this toolkit.



Resident with backyard chickens in Amherst, MA. Photo credit: masslive.com

Examples of Poultry Bylaws in Massachusetts

In Arlington, Massachusetts, hens are allowed in the R0, R1 and R2 residential districts by right. The following regulation was taken from the Town of Arlington Zoning Bylaw under Section 5.04, Table of Use Regulations:

Keeping of no more than six hen chickens (but no roosters) permitted by the Arlington Board of Health for egg-laying, pet, or other non-commercial purposes in an enclosure in the rear yard of a property at least six feet from all property lines and at least 25 feet from residences on adjacent lots.

This specific Town and their bylaw address the number and type of poultry animals allowed, for what purposes, and in what areas of the community. The bylaw also regulates that the animals must be kept in an enclosure and specifies location of this structure and setback requirements from property lines. Residents wishing to own chickens must apply for a permit through the Arlington Board of Health. This helps the Town know how many hen chickens are located in the residential areas and can better enforce regulations.

Located in the Pioneer Valley, Northampton, Massachusetts also has chicken/hen regulations, in addition to regulations for livestock, rabbits and ducks. From Section 350-5.3 Accessory Uses of the City of Northampton Zoning Ordinances:

A. The keeping of farm animals, to include all farm animals and exotics, and a related private stable, for personal use, is permitted as an accessory use in accordance with the following conditions:

(1) The minimum acreage required for keeping any farm or exotic animal, except as described below, shall be 30,000 square feet for the first animal and 15,000 square feet for each additional such animal. Animals under six months not to be counted for acreage requirements.

(2) The minimum acreage required for keeping sheep, goats, llama, rabbits, or poultry, except as allowed under household pets, shall be 30,000 square feet for up to three animals and 10,000 square feet for each additional such animal. Animals under six months not to be counted for acreage requirements. (The requirements for these animals are less stringent than other farm animals because these animals have less environmental impact.)

(3) The location of any stable shall be not less than 100 feet from any street lot line and not less than 30 feet from any other lot line.

(4) There must be adequate fencing to contain all farm animals at least 20 feet from all property boundaries at all times, except when animals are being directly supervised by and under control of a person.

(5) Stables, corrals and yards shall be properly drained and reasonably free from excessive odor, dust, and mud, so as not to create a nuisance or health hazard to the community or to surrounding property owners, from an air or drainage pollution standpoint. Maintenance of the stable and property used in the keeping of animals shall conform to all health and wetland regulations.

(6) Horses, ponies, llamas and sheep may be kept for personal use without being accessory to any other use, otherwise in accordance with this section.

B. The keeping of the household pets, for personal use is permitted as an accessory use for animals commonly considered household pets, including dogs, cats, fish, and birds (parrots, parakeets, doves, pigeons, etc.), six or fewer rabbits, and three or fewer ducks or hens.

These regulations are more specific and go into detail with square footage requirements and fencing. This is because they allow more than just poultry. With the addition of permitting livestock, more stringent standards must be addressed to ensure fewer occurrences of public nuisances.

Also in the Pioneer Valley, Easthampton allows the raising and keeping of small flocks of poultry, which is a maximum of 25 and not including roosters on a lot of at least one (1) acre, by right in the R-15, R-35, R-40, and R-80 residential districts. It is prohibited in the remaining districts. If the situation is the “keeping of up to six (6) chickens (no roosters) on a lot of at least 15,000 square feet for use of the occupants only”, it is allowed by right in a larger number of districts which include the R-5, R-10, R-15, R-35, R-40, and R-80 residential districts.¹ If it is on a lot less than 15,000 square feet than it is only allowed in those districts by Special Permit. Additionally, from Section 6.88a of the City of Easthampton Zoning Ordinance:

A small flock of poultry and a saddle or riding horse or other farm animal for the private use of occupants only shall be kept in an enclosure or building seventy-five (75) or more feet from a street line and fifty (50) or more feet from any dwelling other than the dwelling to which they are accessory.

In Lynn, Massachusetts, chicken applicants must obtain signatures from neighbors showing support of the housing of poultry on that property. This is a good way to keep the peace and reduce the occurrence of nuisances in communities. Coops and poultry enclosures can be required to be inspected by the public health department or animal control officer once or on a set basis to ensure that regulations are followed.

How can this be implemented?

Looking at existing zoning ordinances and bylaws in the area and filtering out what best applies to a specific community is the best option for formulating a poultry zoning bylaw. Each community is different and may be capable of allowing more poultry/livestock in a small amount of area compared to other communities. Obviously, the regulations mentioned in this toolkit can be molded in various ways to fit into a community's framework. The number of poultry allowed, setback requirements, maintenance, fencing regulations, process, permits required, and approval of abutters are all elements that can be changed. Though some cities and towns in the Pioneer Valley may already contain some type of poultry bylaw or ordinance, these may be too restrictive to be able to increase local food access and security. Existing regulations can be examined and amended to allow more families to own their own chickens in order to increase their self reliance and dependence in terms of food sources. It is also important to be aware that zoning regulations can be amended and changed if problems arise or a better option is discovered. Poultry regulations can be created for a community, and amended based on what works well for that city or town in the long term future.

If a community holds great opposition to residentially located chicken coops, the raising and keeping of these animals can be centrally located in one area of a community. For example, a neighborhood coop with a few chickens can be created in a local community garden or indoors in a type of local structure. Though this will not have quite the effect as allowing residential zones the privilege of keeping their own chickens, the few local poultry can be utilized for fresh eggs which can be purchased or donated to the community. This will increase local food access more than having no chicken coops in the community at all.



Chicken coops can be made an asset to a local community if created in a central location or community garden, to be used by the community as a whole.

Photo credit: <http://thegazette.com/tag/indian-creek-nature-center/>

¹ Easthampton, Massachusetts Zoning Ordinance.
<http://www.easthampton.org/downloads/ZONING2222011.p>

Toolkit: Community Gardens

COMMUNITY GARDENS

Community gardens are a tool that many cities all around, even in the Pioneer Valley, use to increase local food access. Run by the community itself, these gardens not only are a way to provide local produce, but they increase social interactions and other benefits. They also assist in reducing blighted areas by creating an active use in an area that is normally rundown and vacant. It is said that community gardens reduce the occurrence of crime and vandalism. Community gardens are collectively run and managed by the community, so food grown here can be taken by those who help run the gardens or the food can be sold at local farmers markets in order to collect some money for additional tools for the garden. Existing gardens are scattered all over today, but more can be created to help reduce our reliance on imported foods. Community gardens can be either temporary or permanent based on location and other factors. They can be used as an educational tool to teach community members and youth about the importance of local and sustainable food systems. Every school should have their own community garden plots to provide fresh fruits and vegetables for student breakfasts, lunches and snacks, and to also serve as a hands on experience education tool. Gardens can either be closed gate or open gate, meaning they are only allowed to be used by a certain group of people, or can be used by anyone in the community. It is strongly encouraged that community gardens should be open gate, so that everyone has equal access to running and taking advantage of the garden plots.



Manchester Street Park, Lawrence, MA. Photo credit: GroundworkLawrence.org



Successful and thriving community gardens through Nuestras Raices, Holyoke Massachusetts. Photo credit: <http://www.nuestras-raices.org/>

How can this be implemented?

Check with zoning codes first to ensure that certain targeted communities allow community gardens. Assessing best locations to create community gardens is a good next step. Areas that should be included are blighted areas, schools,

and areas that are in greater need for locally grown, healthy produce. Pocket parks and parks in general are great locations for community gardens, since it will bring more people to the determined area, and those already in the vicinity can learn about the community garden. Vacant pieces of land are also good areas to design community gardens. If privately owned, the fact that the community will clean up the parcel and put it to a good use should be an incentive enough for the owner to allow it. There would be no financial loss to the owner (or financial gains for most matters), and the plot of land would be upkept and utilized.

Affordable housing developments should also be pinpointed to determine if any community gardens currently exist. If there are none present, gardens should be implemented. Affordable housing communities contain environmental justice populations, which tend to have a higher need for local and healthy fruits and vegetables. Also, gardens can increase social interactions, safety and sense of community in affordable housing environments.

Supplies and tools to start the community gardens could come in the form of donations from local hardware stores, residents, and other retail stores. This will start the process of the garden. Continuous maintenance and need of supplies and seeds can come from residents and the community who tend to take care of the garden itself. Once the initial supplies are provided, the remaining tools needed to keep the garden going shouldn't be too costly for the community residents to overtake.

Many online tools are in place to help jumpstart and run a community garden. One of these such sites is the Boston Natural Areas Network Community Garden Resource Guide (http://www.bostonnatural.org/cgOr_Resources.htm), which provides steps, advice, and tools for community gardens and their management.

Toolkit: Education Programs

EDUCATION PROGRAMS

The tools mentioned in this Food Access Toolkit all have had the same goal and outcome in mind: increase local access to healthy food and food systems, and decrease our reliance on imported food systems. But all these tools can also offer educational pieces to teach the community overall, and especially youth about sustainable local food access and systems, and how to prepare the foods they buy. Workshops, learning sessions, lunch and learn series, speakers or even volunteering methods are all capable of educating the community on this subject. Various programs exist locally and nationally that do this in a successful manner. Educational programs can be tied into almost any urban agriculture tool/program. Community gardens, farmers markets, indoor markets, urban agriculture in malls and shopping centers, greenhouses, and rooftop gardens all can be more successful if educational aspects are tied into the overall programs.

YouthGrow and UGrow Programs

The YouthGrow and UGrow programs, based out of Worcester, Massachusetts, involve community members in the growth of local produce for the community. The YouthGrow organization, fully known as Youth Growing and Raising Organic in Worcester, is an urban agriculture youth employment program for 14-16 year olds that takes place in the summer. The youth get paid as any summer job would, and they learn about organic farming, participate in skill building workshops, develop group projects and participate in youth empowerment and leadership activities.

The UGrow program, fully known as the Urban Garden Resources of Worcester, was created to increase food security and urban gardening within local neighborhoods. Neighborhood groups, schools, youth, senior citizens, social

service agencies and grassroots community residents are involved in the community gardens that UGrow maintains in order to decrease Worcester's reliance on food systems located outside of the City. With 51 community gardens and over 400 volunteers, the organization has grown significantly since its creation in 1995. Fourteen of these community gardens are school gardens, aimed to educate school children about gardening and sustainable food systems. The organization also offers additional services such as compost delivery, soil testing services, organic seedlings and seeds, gardening workshops, and technical assistance.



UGrow. Worcester, MA.

Photo credit: <http://www.recworchester.org/what-we-do/food-justice/ugrow/>

How can this be implemented?

Programs that already exist in Massachusetts related to agriculture and food are good places to start with implementation of educational programs. For example, Nuestras Raices in Holyoke and Seeds of Solidarity in Orange, both offer educational programs to teach the community about sustainable, local urban agriculture. Nuestras Raices offers: after school programs to Holyoke and other local schools to teach youth how to set up, plant and maintain gardens; educational workshops on nutrition, cooking, health and leadership; and involves the youth in painting local murals, working on the farm and selling the produce at the local farmers market. Seeds of Solidarity is a farm that grows food in a sustainable way (outside on a farm and inside within a greenhouse) and emphasizes teen and youth assistance. Mainly run by youth, Seeds of Solidarity grows food to sell at festivals and to local retailers and restaurants, offers internships, and has a deep connection with linking farmers to local schools in order to encourage produce to be used in school systems. The organization's goal is to "provide people of all ages inspiration and practical tools to use renewable energy and grow food in their communities". Looking to existing programs and organizations like these is a good basis for creating more educational food related programs in the Pioneer Valley. There are an abundance of others across the state that also can be looked at as examples.

Though Pioneer Valley Planning Commission wouldn't be able to run the program entirely alone, they can help with kicking off the program. Getting other organizations and the overall community involved in the process will ensure that the programs will continue to gain momentum and thrive. Similar to the UGrow organization out of Worcester mentioned earlier, community gardens can be placed at local schools. This educates the school children of gardening and local sustainable food systems, in addition to providing fresh fruits and vegetables available for meals at the school. The children from the school can learn how to grow the food themselves, upkeep the gardens and be able to take home the food that they grow with their own hands. This type of project could prepare future food careers for these students.

Toolkit: Farmers Markets

FARMERS MARKETS

A more obvious tool to increasing local and sustainable food access in the Pioneer Valley region is farmers markets. Farmers markets are reasonably widespread, not only in this region but across the state. Some food deserts or food swamp areas, however, exist that do not contain any farmers markets. Many cities and towns also in the Pioneer Valley do not have a farmers market in their community. Advancing the number of these farmers markets offer an array of benefits for neighborhoods, with access to local foods being the biggest benefit. It not only benefits consumers, but also local farms and farmers who will be able to sell more of the produce that they grow. This helps to preserve agriculture farms that are still in existence today in the Pioneer Valley.

Northampton Farmers Markets

Northampton has a number of farmers markets, which makes it a good example to look at for this tool. The Northampton Saturday Market, Tuesday Market, Winter Market, and Florence’s Wednesday Market all offer freshly grown food produce, dairy, flowers, and meat products. All, except for the Winter Market, accept WIC coupons and food stamp cards. Through an access to healthy food for all campaign, the Northampton Tuesday Market doubles the amount of food stamps, which is exceptionally beneficial to those of low income who need access to local, healthy and affordable foods the most. When a

person swipes their EBT card for a certain designated amount, they will actually get double the amount. The program, called Food Stamps x2, attracts more low-income families to purchase food from the Tuesday Farmers Market, and it will be expanded to all the other Northampton Farmers Markets next year. The Tuesday Market in Northampton made this campaign possible by collaborating with Grow Food Northampton and raising money from available grants and donations. Not all



Northampton Farmers Market. Photo credit: NorthamptonTuesdayMarket.com

the markets run year round (most run from May to November due to the growing season), but the Winter Market runs through the winter, so there is always access to local foods.

Specifically looking at the Northampton Tuesday Market, the markets are not only used to sell food products to the community. They hold special events, contests, and activities for kids. This boosts social interactions and the feel of a “community”. Northampton Farmers Markets are not just to stop by to pick up some vegetables for dinner, it’s also a place to interact with similar people and

spend a few hours for an event like listening to a live band play. The Farmers Market also offers internships to students willing to learn about local and sustainable food access and systems.

Indoor Markets

An issue with most farmers markets is that they are located outdoors, restricting length of operation during the year, which in turn only provides healthy and local foods during certain months. A solution to this is to create more indoor markets which would be located in a more temperature controlled setting, allowing a year round farmers markets to offer a continuous supply of produce. Obviously there is less food available during the winter months and the end of the growing season, but any local foods (honey, preserves, jams) can be sold here. Indoor community gardens and greenhouses can supplement additional food if these uses are located nearby. Another advantage of indoor farmers markets is the ability to extend their hours of operation. For example, currently most outdoor traditional farmers markets close before the sun goes down. With indoor markets and adequate lighting though, hours of operation can extend later into the night.

How can this be implemented?

You can't have a farmers market without farmers and food stands. The first step would be to find local farmers and produce growers, and see if they would be interested in selling their food at a farmers market. If there is a large enough interest, then a farmers market would work. The next step is to decide where the farmers market will be and what communities and neighborhoods it will serve. They should be located in areas that need it most (i.e. environmental justice neighborhoods), and where there is not already existing markets in place. Areas that are located within food deserts and food swamps should also be looked at, since these areas tend to not have easy access to healthy and local foods. These three locations are the best to determine what areas should contain farmers markets.

Since farmers markets will be aimed to be located in low income communities who do not have good access to healthy and local foods, the vendors at the markets should be able to accept food stamps from customers. There are already markets of this type that exist in Massachusetts, such as the one located in downtown Holyoke, Northampton (previously mentioned) and Somerville. Specifically, Tuesday Market in Northampton offers *double* the price for food stamps as already mentioned. Programs like this should be implemented in almost all farmers markets, especially those located in environmental justice communities.



Northampton Farmers Market. Photo credit: NorthamptonTuesdayMarket.com

After getting farms and vendors on board, and deciding where to hold the farmers market, deciding what days and times it will run would be the next step. Should it run once a week? Twice? Everyday? This will obviously depend on certain factors, such as the availability of farmers and vendors, availability of space, and popularity of the market itself.

Once the details are determined, some sort of marketing needs to be created to inform the community of the new farmers market in town. Easy to understand, and creative flyers can be posted at key locations in the community. The flyers can be sent home with children of the local food systems. The market should be advertised on the city or community's website, in addition to being broadcasted on local television channels and radio stations. The Northampton Farmers Markets are conveniently listed on the City of Northampton's website with information such as where to park, what payment options are available, hours and days of operation, and location of market. Supplemental websites are available for the individual markets which go into further detail on the vendors, photos, and events that are upcoming (for an example of one of these websites, see the end of this document). Local news stations can also run a short news story about the new market, and a short article or advertisement can be run in the newspaper once in awhile to reach out further to the community. With marketing strategies in place, more of the community will be made aware of the available local, healthy foods that can be purchased using food stamps for those who need it (and maybe even worth double what food stamps they have), which in turn will create more sales and make the market overall more successful. This will pave the way for more farmers markets to spring up in key locations.

For communities where farmers markets are already located, hours of operation can be extended if need be. The longer the farmers market operates, the more food can be sold and more consumers have the ability to shop there.



Northampton Farmers Market.
Photo credit: NorthamptonTuesdayMarket.com

Additional Resources

Northampton Tuesday Farmers Market. <http://northamptontuesdaymarket.com/>

Toolkit: Rooftop Greenhouses/Gardens/Eco-roofs

ROOFTOP GREENHOUSES/GARDENS/ECO-ROOFS

In order to increase access to local, healthy foods and create a sustainable food system that the Pioneer Valley can rely on, there needs to be spaces available to grow such local foods. Since a lot of urban areas are built out, and sprawl continues to increase, unique locations for urban agricultural farming practices need to be looked at. Creating such uses on top of buildings is one way to address this concern. Whether this is existing and abandoned structures, or new and occupied facilities, harnessing vast areas of rooftops provides an array of benefits, associated with urban agriculture and other social/environmental benefits. Not only will roof gardens and greenhouses provide spaces for urban gardening, it contributes to reducing stormwater runoff, reducing the urban heat island effect, adds to aesthetics and quality of life, and reduces the use of valuable undeveloped, green spaces that normally would be used for standard agricultural processes. As with most of the tools in this toolkit, educational programs can be incorporated to teach community members and youth about local and sustainable urban agriculture. The food grown in rooftop gardens and greenhouses can be sold directly to consumers, at farmers markets, to retailers and restaurants, and to local schools within or near the community.

What is an eco-roof?

An eco-roof or greenroof is a roof that is covered with a water proof membrane and a variety of vegetation. Eco-roofs or greenroofs provide a number of benefits already mentioned. They collect and filtrate water that normally would runoff into manmade sewer and stormwater systems; they help with cooling urban areas and reducing the urban heat island effect, which is caused by a large number of impervious surfaces that have a low albedo effect; they keep heating costs down for the building, since the vegetated roof cools the building; they provide aesthetic qualities; they incorporate vegetation in needed urban areas where vegetation is sparse. The main issues with implementing eco-roofs and greenroofs, however, is associated costs and maintenance, in addition to determining whether a building's roof is structurally stable or not to support such a structure. Different design features can be implemented however that will reduce the weight of the greenhouse overall, such as the use of hydroponic systems which tend to be operated with no soil.



Hydroponic system.
Photo credit: <http://www.hydroponics-at-home.com/>

Harnessing greenroofs, gardens, greenhouses or eco-roofs into a source of food production is the main benefit that we are looking at in this tool.

Gotham Greens Rooftop Greenhouse

In Brooklyn, New York in the Greenpoint borough is a fairly new designed and operating industrial rooftop greenhouse. At Gotham Greens, a variety of vegetables and herbs are grown and harvested each day to be sold to local retailers and restaurants. The system already has restaurants and retailers invested in the fresh foods; one of these being the local Whole Foods market. Thirty tons of produce are grown annually.

The greenhouse, which sits atop an old bowling alley in an industrial area, is sustainable, in addition to being pesticide, herbicide and soil free. The greenhouse uses hydroponic systems, water is recirculated, sisterns collect rainwater used in the operations, and also atop the roof is an array of solar panels to run the project. Using soil free hydroponic systems uses 10 times less water than traditional



Gotham Greens greenhouse atop industrial building in Brooklyn.
Photo credit: GothamGreens.com

agriculture processes. At higher elevations, the greenhouse effect receives optimal sunlight and can operate year long since the food is grown indoors where it is temperature controlled.

The food grown at Gotham Greens lowers the amount of food needed to be imported. Gotham Greens expects to expand their greenhouse system on rooftops in other areas of the City which will further reduce the amount of imported foods. Growing foods locally, like this, creates a more sustainable and resilient food system so that the Greenpoint community in New York doesn't have to rely quite so much on food systems elsewhere.

Indoor greenhouses and gardens

Although greenhouses and gardens work best on top of a large building's roof due to direct contact with the sun, the time and cost associated with performing structural analyses on the roofs may steer some communities away from implementing this program. Also, if implemented in older and vacant buildings, some of these buildings may only contain staircases to reach the roof which may make the concept unappealing to the general community. This is due to the increased perception of extra work having to climb multiple stairwells to reach the roof of a tall industrial building. If this is the case, indoor greenhouses and gardens can be considered. Constructing the greenhouses and gardens within the building addresses these issues in addition to protecting the structures for a longer period of time (since there will be less wear and tear compared to being located on the roof, being more susceptible to environmental events). In order to make up for lost sunlight however, other lighting methods must be implemented. Some communities are already looking into implementing indoor greenhouses in old industrial buildings.

How can this be implemented?

Collaboration with city staff, the community and building owners must be underway to make this happen. Large enough buildings that have structurally sound roofs to support a greenhouse or garden need to be available. Local zoning ordinances and bylaws, including building codes, must allow a greenhouse or rooftop garden. Appropriate building permits need to be sought out if necessary. In terms of finances, types of projects like this may be able to be funded through grants and/or loans.

In the Pioneer Valley, there are a large number of historical industrial buildings which are characterized by large, expansive, flat and barren rooftops. Utilizing these roofs for roof gardens and greenhouses would be beneficial to communities all around. The location of these old industrial buildings tends to be near the downtown area of cities, which makes it an ideal location to grow urban agriculture food. They also tend to be located near water bodies, such as rivers or canals.



Mill buildings, like this one in Holyoke, MA, have large flat roofs that are appealing for rooftop gardens and greenhouses.
Photo credit: <http://www.gazettenet.com/2010/10/18/determined-mill-developer-keeps-faith-concept-revitalized-city--0>

This could increase waterfront access for environmental justice populations, if the buildings that sit alongside the water are utilized by the community to grow food. Community members can be involved in the maintenance and harvesting of the produce, along with local organizations. Or the facility can create jobs by hiring staff people to run the garden or greenhouse.

Toolkit: Urban Agriculture in Malls

URBAN AGRICULTURE IN MALLS

With a limited amount of space useable for agricultural processes, in addition to the large amount of area needed for farming purposes, we need to start looking at more unique and out-of-the-box locations to improve local food access for environmental justice communities. One place that is ideal for indoor agriculture methods and food gardening is malls and shopping centers. With some number of vacant stores in malls and shopping centers, these underutilized spaces can be put to use by planting indoor farming areas. Food grown in these areas can be sold to restaurants, retailers, at farmers markets, to local school systems, and directly to the public. If grown in malls, and sold directly to shoppers, a convenience factor plays in. The mall gardens will raise awareness and popularity if it is viewed as being convenient for shoppers who are already at the mall picking up other items. Educational programs can be tied into the overall project to teach youth and the community about the importance of local, healthy sustainable food systems and urban agriculture. Volunteers can maintain and grow the produce, or if jobs want to be sought out, paid positions can be created to do the work. Urban agriculture in malls can be either a temporary or permanent use, based upon the location of where it is set up, popularity, or costs associated with it.

Gardens Under Glass

An example of urban agriculture in malls can be seen at the Galleria at Erieview Mall in Cleveland, Ohio. Between collaboration with the mall's owner and marketing director, urban agriculture was able to be brought into this commercial structure in an area that needed more locally grown food products. Through a system of hydroponics and the mall's glass atrium, a variety of produce is grown inside the mall, such as peppers, cucumbers, lettuce, tomatoes and herbs. The food grown is sold to local retailers and restaurants. A farmers market has been created once a week at the mall to sell the produce also



One of the Gardens Under Glass locations at the Galleria at Erieview Mall in Cleveland, Ohio. Photo credit: http://blog.cleveland.com/metro/2010/12/the_galleria_greenhouse_the_co.html

to consumers and shoppers. The project has a sustainable aspect too. The hydroponic systems recirculate wastewater from a nearby aquarium, reducing water consumption. For the future, a composting system is planned on being implemented that will recycle waste from the mall and will

be used in the gardening. The project provides an educational component also. Workshops and learning sessions are frequently held to teach people about sustainable farming methods.

How is this implemented?

Collaboration between city staff, the community, local organizations, store owners, and mall personnel is important to ensure that everyone is on board with the project. City staff will help move the project along. The community and local organizations will offer input and volunteer help.



The Holyoke Mall at Ingleside has a glass atrium area similar to the Galleria at Erieview Mall. Urban agriculture can be implemented here. Photo credit: <http://www.labelscar.com/massachusetts/holyoke-mall>

Store owners can also offer input and can express whether they are interested or not in participating or donating some store space. Mall personnel will be the most important group to collaborate with, since they know the specifics of vacant stores, vacancy rates, space available throughout the mall, interested retailers and restaurant owners, and other important information. Assessing the space available and vacancy rates is an important factor to look at since this will display the chances of implementing such uses.

Zoning would not apply to urban agriculture in malls since the use is inside the mall and not located outside of the mall. Appropriate building codes and licenses may need to be abided by, but with assistance from city staff, these can be attained.

The Holyoke Mall at Ingleside in Holyoke, Massachusetts is a great mall to start a program similar to the Gardens Under Glass initiative. The Holyoke Mall is the largest mall in Western Massachusetts and one of the largest in New England. It is also located in a City that has a high number of environmental justice populations. Being one of the poorest communities in the state, with almost half the

population being of Hispanic descent, creating urban agriculture services in the local mall will improve access to healthy foods for these populations. Local community groups that can be involved in this project are Nuestras Raices and the Holyoke Food and Fitness Policy Council. Eastfield Mall and Hampshire Mall, both also located in the Pioneer Valley, are also good malls to implement this project. All three of these malls have a number of vacant stores or spaces available to grow produce.

Toolkit: Farm to Institution

FARM TO INSTITUTION

What is Farm to Institution? How does it work?

Farm to Institution involves local farmer production directly for the institutions in the same area. It is an alternative from traditional distribution strategies to improve the farmers economy and promote health food. These institutions may be schools, colleges, hospitals, prisons and cafeterias. It is an alternative to improve the local economy and in the same time promote more access to health food and educational activities.

One kind of farm institution program is the Farm to School. Farm to School programs have been operational in the United States for nearly ten years ago. 2006 data showed us that there were over 950 schools programs in more than 35 states. The farm to school can help resolve two important questions in our society: the diet and health of children and the disappearance of small farms. With these alternatives the students have more access to healthy and fresher food and create new markets for the local farmers. They can be incorporate educational activities and use the existing routes for the farms. We have several schools in Massachusetts included in this project.

The Massachusetts Farm to School Project has been working since 2004 to facilitate sustainable relationships between the Commonwealth's farmers and institutional food services. A sustainable relationship is one that is profitable for the farm, affordable for the food service provider, and good for the consumers and community. Increasing concern about children's diets has provided an urgent impetus to increase the amount of fresh, healthy, local foods served in schools, as has the desire of many of our citizens to improve food security through greater local food production. There is increasing interest in local foods purchasing amongst schools, colleges, and other institutions. The project helps dining services staff make connections with local farmers to obtain local products to serve in their cafeterias, which helps these farms expand their local wholesale markets. Students and other institutional consumers receive the benefits of access to more locally grown food, while fuel and energy costs associated with bringing food in from elsewhere are avoided. The project also has the help Massachusetts Department of Agricultural Resources, The Massachusetts School Nutrition Association, and Community Involved in Sustaining Agriculture. As mentioned previously, Farm to Institution can also be applied to other institutions such as colleges, hospitals and cafeterias.

We have about 250 public school districts, private schools, and colleges in the Commonwealth preferentially serving local foods, over half of which have received assistance from the Massachusetts Farm to School Project. About 110 farms are currently selling their products directly to schools across the state according to Massachusetts Data from Farm to School. Visit the Massachusetts Farm to School website at <http://www.massfarmtoschool.org> to see a list of districts in Massachusetts that participate in this program.

Food Toolkit Topics with Related Case Studies

Agricultural District

Charlotte, VT Zoning Regulations

Community Gardens

Groundwork Lawrence

Manchester Street Park

Boston Naturals Area Network/SLUG

The Food Project

Urban Garden Resources of Worcester

Youth Growing and Raising Organics in Worcester

Education Programs

Boston Naturals Area Network/SLUG

The Food Project

Urban Garden Resources of Worcester

Youth Growing and Raising Organics in Worcester

Rooftop Greenhouses/Gardens/Eco-roof

Gotham Greens

Eagle Street Rooftop Farm

The Plant

Urban Agriculture in Malls

Gardens Under Glass

Farm to Institution

The Food Project

Farm to Hospital: Promoting Health and Supporting

Farm to School Program: Massachusetts