



# MASSACHUSETTS ENVIROTHON

## 2014 Mass Envirothon Current Issue

# **Sustainable Local Agriculture**

## Background and Strategies for Community Research

The Mass Envirothon Current Issue challenges your team to investigate an important environmental issue as it occurs in your community, to develop recommendations, and to present your findings to a panel of judges at the Envirothon competition.

In 2013-2014, Mass Envirothon teams will investigate the sustainability of agriculture – its ecological health and its economic vitality for the long run – in your community. We will focus primarily on food production, the most essential form of agriculture for life and health. Part of the challenge will be to look at the food system as a whole, and what can make it more fair and accessible to everyone, then think about what that means for your community.

The 2014 Current Issue Problem will ask your team to identify the most important steps your community can take to strengthen local agriculture for the long run. Teams are especially encouraged to look for ways that young people can take effective action in their communities on this issue.

To prepare for your presentation through the year, your team should plan to

- Get outdoors and become hands-on knowledgeable about agriculture around you
- Look for connections to Envirothon's natural resource topics: Soil, Water, Forest, and Wildlife
- Get acquainted with people who farm, garden, and/or work on agriculture and food system issues
- Identify ways that individuals, groups, institutions, and local government can contribute to sustainable local agriculture.

Use these pages as a springboard to get you started on your research into agriculture and food systems in your community.

**Please check the Mass Envirothon website for an update and new resources on February 1:**

<http://www.maenvirothon.org/currentissue.htm>

**For additional background, see the North American Envirothon website at:**

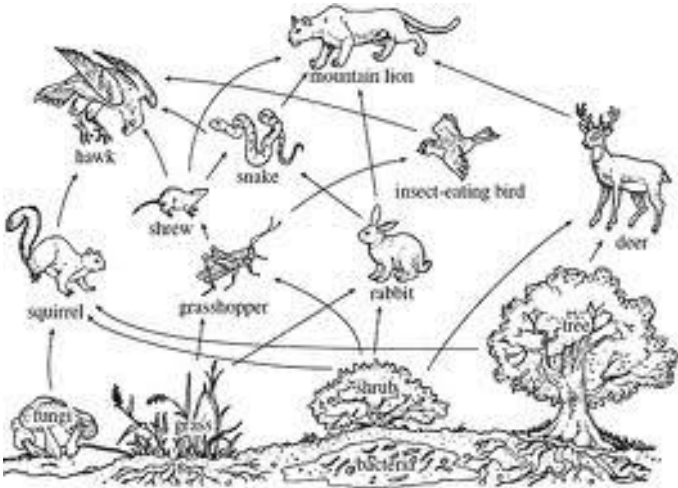
<http://www.envirothon.org/current-competition.html>

Questions? Contact Will Snyder, UMass Extension, at 413/45-3876 or [wsnyder@umext.umass.edu](mailto:wsnyder@umext.umass.edu)

## People are part of the Ecosystem!

Agriculture is the best place to see that our human economy isn't something separate from nature. Our economy is actually just a subset of Nature's larger economy. Human activity is subject – in the long run – to the same limits and opportunities as any other species. We are connected in the most basic way possible: We eat food every day.

**Food Systems.** The most helpful image to keep in mind as you explore Sustainable Local Agriculture is the familiar food web diagram from basic ecology lessons, showing energy being captured by photosynthesis and flowing up through the trophic levels, and essential nutrients recycling in the system through death and decay of living things. For example:



<http://generalscienceandmathematics.blogspot.com/2010/11/food-web-diagram.html>

**The difference: agriculture puts people in the web.** Our part of the web, all the processes and infrastructure involved in producing, processing, distributing, and consuming food, and managing the waste generated, is called the **food system**. While the food system is a very human construction, including food banks and farmers markets, school lunches and grocery stores, fast food and landfills and compost piles, and your grandmother's best recipe, it is important to remember that it is part of the larger ecosystem, and participates in ecosystem functions every step of the way.

**Sustainable Agriculture and Community Food Security.** The term "Sustainable" implies systems that are capable of maintaining their productivity and usefulness to society indefinitely. The *World Conservation Strategy* (1980) defined conservation in a way that could serve as a good definition of sustainable agriculture: "the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations." The idea of a **sustainable food system** expands the concept of sustainable agriculture to include issues of fairness, equity, democracy, and justice within human society.

**Community Food Security** refers to the goal that a food system ensure **access to affordable, fresh, nutritious, and culturally appropriate food for all people at all times.**

**Some basic rules of food production that is in harmony with natural systems** can be simplified as:

- Use current solar energy income (not fossil energy)
- Recycle everything: Waste = food! Reuse materials, build soils, keep nutrients on the farm, prevent pollution downstream.

- Foster biological diversity: grow a variety of crops, leave edges of the field to nature. Diverse systems are more able to use energy and recycle materials efficiently, and are better able to adapt to changing conditions.

Agriculture is a human intervention in the ecosystem, an attempt at intensive management of a portion of the ecosystem for our own purposes. But nature makes the rules. It makes sense to harmonize our use of the ecosystem with those rules. So ecologically-oriented farmers also

- Pay attention to local conditions: there are no one-size-fits-all solutions, each place has its own special circumstances, both limitations and opportunities.
- Practice humility: Any alteration of the ecosystem will have multiple consequences, most unintended. The land is more complex than science and the human mind will ever understand.

**Agriculture and Energy.** The most important basic rule above is the first: Use current solar energy! We are just beginning to emerge from the 20<sup>th</sup> century Oil Age, when agriculture and connected food systems, like every other human activity, became addicted to fossil fuel. Fossil hydrocarbons were used to mechanize farm work, power food processing and transportation, and synthesize fertilizer and pesticides. Cheap fossil fuel made possible the development of large-scale, energy-intensive, industrial forms of agriculture, and global food supply chains, that ignored waste and local environmental costs. In Massachusetts, one effect of cheap fuel was that suburban development could sprawl across valuable farmland.

Introducing fossil energy into the ecosystem where we made our home made our lives easier for a while. It allowed us to neglect our ecosystem connections without paying the price right away. It resulted in tremendous growth in our consumption of natural resources and rapid growth in world population. Our ecological footprint grew too big for the ecosystem to handle, and the effects have begun to catch up with us: depleted soils, polluted waters, superbugs, obesity, and too much carbon into the atmosphere, causing climate change. Agriculture has been on the front lines in both producing and suffering from these effects.

**Agriculture and Soil.** The 21<sup>st</sup> century can be the era when we use scientific knowledge and close attention to the land to develop agricultural systems that are more in harmony with natural systems. **Understanding the importance of soil will be a critical part of this new era.** We are already seeing a paradigm shift – from viewing soil essentially as a potting medium that holds plants upright while we add necessary ingredients, to seeing soil as a diverse ecosystem that is capable of regulating water, supplying nutrients, recycling and detoxifying wastes, controlling pests and diseases, sequestering carbon, and sustaining itself. Soil biology – the study of the web of life in the soil – is a growing field. The Natural Resources Conservation Service’s recent nationwide Soil Health Initiative focuses on strengthening “the continued capacity of the soil to function as a vital living ecosystem that sustains plants, animals, and humans”.

The transition to ecological agriculture, while necessary, will not be easy. It will take time and patience. Ecological knowledge, more comprehensive planning, careful constant monitoring of soils and biological communities, energy conservation, and different tools and infrastructure will be necessary. Farming will become more brainpower intensive. Smaller, more diverse farms are likely.

Fortunately, Massachusetts is well-positioned to be a leader in this transition, and a growing number of young people are interested in this work. Envirothon teams, with their ecological knowledge of the soil, water, forests, and wildlife in their community, are well-prepared to think in these new ways.

## **Strategies for Sustainable Local Agriculture: What you might find in Massachusetts communities**

### **Strategies that promote ecologically sound food systems**

Ecological health starts with the land where the food is grown or raised. Strategies include

- Soil health management systems like:
  - Crop rotation
  - Use of cover crops to build soil organic matter and prevent erosion
  - Composting organic waste
  - Low-till or no-till systems
- Water resource conservation, including:
  - Nonpoint source pollution prevention through on-site management of waste and wastewater (“waste” that can actually become food for growing plants).
  - Urban rooftop gardens for food AND for stormwater management
- Monitoring and protection of biological diversity, including:
  - Encouragement of native pollinators and insect predators
  - Integrated Pest Management
  - Maintenance of diverse edge and nearby forest habitats
- Conservation of energy and use of renewable energy

**Local is important!** The ecological health of the food system extends beyond the farm. For example, food produced locally means fewer “food miles” – less energy expended in transporting food from distant places, and less climate-changing carbon emitted to the atmosphere.

### **Strategies that promote economic viability and vitality**

Economic viability starts with the farm as an economic enterprise but extends to the community as a whole. Strategies can include

- Season extension strategies such as new crops and use of greenhouses and hoop houses
- Marketing strategies such as
  - Community Supported Agriculture
  - Cooperatives
  - Agricultural tourism
  - Farm stands
  - Pick your own
  - Value added products
  - Farm to school
- Land protection measures that provide tax relief and stability for long term planning
- Zoning to encourage agriculture in urban areas

## Strategies that strengthen Community Food Security

Interest in strengthening local food systems is growing – in rural, suburban, and urban areas. A host of entrepreneurial ventures – using for profit and not for profit models – are springing up to meet new needs as the system grows.

**Food Policy Councils.** Food and agriculture policies are being developed at local, regional, state, national, and international scales. But sometimes these efforts are disconnected and even at cross-purposes. And in many cases, the average citizen has little part in shaping them. Food policy councils aim to bring together all the stakeholders in a community food system and give them a voice in constructing a system that reflects their values. The councils' goal is not only to gather information to support sensible policy development, but to promote democracy and sustainability more broadly. See <http://www.markwinne.com/wp-content/uploads/2012/09/FPC-manual.pdf>

Urban communities in particular have taken a lead in this area, often **including the public health community** to address issues such as obesity, farmers markets for food deserts, recreation and fitness opportunities. Holyoke's Food and Fitness Policy Council is a good example: <http://holyokefoodandfitness.org/>

**Email listservs, web sites, and social media connections.** A great deal of local agriculture/food system information – about events, jobs, resources, new ideas – is shared via the internet. Joining one or more email listservs is an easy way to open a window on this booming economic sector and to get the most up-to-the-minute information. The web sites of many food system organizations offer a way to join an email list. For example:

*The Boston Food System provides a forum to post announcements of events, employment opportunities, internships, articles, programs, lectures, and other activities of a non-commercial nature covering the area's food system - food, nutrition, farming, education, etc. - and take place or focus on or around Greater Boston (broadly delineated):* <https://elist.tufts.edu/www/info/bfs>

**Urban farming and gardening** is an example of a strategy that can solve multiple problems and reinforce multiple solutions at once. For example, according to the Boston Redevelopment Authority's May 13 2013 newsletter, urban agriculture is good for Boston because:

- Community based farms can bring people together, increasing cooperation, collaboration and neighborhood building.
- Urban agriculture improves access to affordable, fresh, healthy food.
- Urban farming provides an opportunity for Bostonians to learn how to grow food, and empowers entrepreneurs to operate a farm right in the City.
- Local farming can be an effective tool for empowering youth, by teaching young people how to grow food and run a business.
- Urban farming teaches us about using land wisely, which helps us grow our neighborhoods and communities in a positive and healthy way.
- Farming in the city is good for the environment because it can reduce transportation costs and carbon emissions on the buyer and grower's end.
- Urban farming is a great way to get Bostonians excited about sustainability and "greenovation," so that we can make this a cleaner, healthier city.

Rooftop gardens can provide particular benefits, not only transforming underutilized rooftop space into food production centers (and sometimes a new stream of income), but also conserving energy by providing the building below with insulation in the winter and sunlight absorption in the summer.

## **Current challenges for sustainable local agriculture**

**Climate uncertainty.** Science tells us that the fossil carbon we have emitted into the atmosphere is leading to an overall warming of the atmosphere and oceans. How this change be manifested (Storms? Drought? Floods? New pests?) in any particular location in any particular year is unclear. How can farmers account for these risks in their planning?

**Pollution and stress on natural resources.** Our consumption and population levels are exceeding the carrying capacity of our natural resource base. Agriculture is particularly vulnerable to pressures on water and soil resources.

**Energy transition.** The change from fossil fuels to renewable energy sources, while it can present opportunities, can also be expensive and difficult.

**Scaling up.** A good problem: Although it is thriving, vibrant element of the Massachusetts food economy, local agriculture faces significant obstacles as it seeks to “scale up” and take a larger share of the Massachusetts food economy. For example, a school cafeteria shifting from conventional “heat and serve” meals to meals with farm-fresh ingredients will need new relationships (with local farms and suppliers), new equipment (such as tools for washing, cutting, and cooking), new skills (for cooking and serving fresh food), and new systems (such as food safety protocols and ordering systems). See <http://www.buylocalfood.org/upload/resource/ScalingUp10-17-11lrwithLinks.pdf>

**Corporate domination of the economy.** Advocates for local sustainable agriculture cannot match the power of agribusinesses that lobby for federal policies that benefit large corporations engaged in global trade. Similarly, marketing and advertising by corporations in the food system tend to overwhelm education about nutrition and community food security.

**Growing inequality.** Hunger and nutrition-related health disparities in our communities provide a dramatic demonstration of the growing gap between rich and poor that is a defining feature of 21<sup>st</sup> century American society. Will sustainable agriculture be for all of us?

## **Favorable conditions & opportunities for sustainable local agriculture**

**Land Resources.** Massachusetts’ diverse topography and soil types favor a variety of farm products.

**Land Protection.** A variety of mechanisms for land protection through individual, community, and state and local government initiatives are available (and in many communities already in place) to increase farm viability.

**Population.** While it is unlikely that Massachusetts could grow all the food needed to feed its current population, the state’s population density and diversity, and proximity to farmland, presents a variety of marketing opportunities for local foods.

**Growing public awareness.** “Buy Local” campaigns have educated Massachusetts residents to the multiple benefits of economically viable local agriculture: providing fresh food, supporting family farms, keeping money in the local economy, reducing carbon emissions for transportation, protecting local landscapes.

**Energy uncertainty.** Fluctuating prices and public recognition that fossil fuel use contributes to climate change, may spur adoption of more environment-friendly renewable energy technologies as a stable, lower cost alternative on farms and elsewhere.

**State and local government.** Massachusetts state government, and in particular the Mass Department of Agricultural Resources, has been more oriented than most states toward small scale agriculture and community food security. For example, Massachusetts pioneered the practice of providing food stamp benefits in the form of coupons for use at farmers markets. Municipal agriculture commissions dedicated to supporting local agriculture are sprouting in towns across the state.

**Federal agriculture outreach.** With their historical roots in the Progressive Era and the New Deal, County Conservation Districts, the Natural Resources Conservation Service (originally the Soil Conservation Service), and Cooperative Extension System (now UMass Extension/Center for Agriculture) are adapting to provide support to local agriculture in Massachusetts.

**Scientific research.** There is a growing body of scientific research and expertise on ecologically sound agricultural practices. In recent years, the science of ecology, with its understanding of the complexities of feedback within systems, and scientific research that partners with the community and practitioners to understand local conditions, has been increasingly accepted and adopted by the agricultural science community.

**New agricultural technologies and practices.** Advances in season extension, pest management, energy conservation and renewable energy technology, and soil health management are all contributing to farm viability while reducing ecological stress.

**New marketing strategies.** From farmers markets offering SNAP benefits, to community supported agriculture that allows farmers to share the risks and rewards of farming, to agri-tourism that provides recreational opportunities as well as food to the public, Massachusetts farms are finding new ways to add to their own and their communities' economic vitality.

**Organization.** New nonprofit and small business enterprises, and networks of organizations, are springing up to take advantage of niches and networking opportunities. Food policy councils show promise of focusing disparate community interests – from farmers to public health officials – on the value of strong local food systems. Coordination and communication among activists and with the general public, via listservs, web sites, and social media are also growing.

**Youth and empowerment.** There is a surge of interest in food and agriculture, particularly among young people, as a constructive way to “do something” that contributes to a sustainable society in the 21<sup>st</sup> century. The interest is not necessarily in traditional careers but in ways to make food and agriculture a part of one's livelihood and community participation. There is great sense of hope and possibility and direction in this developing vision of a new economy – new values and a different way to live, work, be in community.

## Getting Started on Your Community Research

The following pages introduce several starting points for team research – plus a listing of helpful resource links. To do a good job in your research, your team will eventually need to be acquainted with all these areas. But you can start with any one of them.

The resources and directions for research here barely scratch the surface of what is out there to be explored in your community. Don't feel limited by the suggestions here!

### Raising your own awareness

**Definitions.** A variety of terms are used to describe ecological approaches to agriculture in the 21<sup>st</sup> century. There is no one “correct” term, but if you pay attention to the different terms and their definitions, you will gain a better understanding of the concerns and perspectives in this field. Some common terms with subtle differences to google:

- Sustainable Agriculture
- Regenerative Design
- Permaculture
- Resilience
- Organic agriculture

The term “organic” deserves special attention, as it started (and continues) as a radical countercultural philosophy but has taken on a commercial definition as well. In his book *The Gift of Good Land* (1981) Farmer/writer Wendell Berry wrote that: *“An organic farm, properly speaking, is not one that uses certain methods and substances and avoids others; it is a farm whose structure is formed in imitation of the structure of a natural system that has the integrity, the independence and the benign dependence of an organism.”* In the early 2000s, as interest grew, the term “organic” was mainstreamed through USDA Organic Standards that do focus on “certain methods and substances” rather than ecosystem and community connections.

**Foodsheds.** A “foodshed” a concept based on the watershed model, describes the flow of food from where it is grown to where it is consumed.

- What's the foodshed of the lunch you ate at school today?
- Who had a hand in making that lunch possible for you to eat all the way from seed company to farm to table?
- What foods could be included in a year-round Massachusetts diet?

Community Involved in Sustaining Agriculture (CISA), a buy local advocacy organization in the Connecticut River valley has developed an online interactive calculator that quantifies the benefits of local agriculture. Part I of the CISA Local Food Calculator tallies your local food purchases. Part II helps you see the impact of local purchases on the economy. See <http://www.buylocalfood.org/buy-local/local-food-calculator/>

**How much of our food could we grow in New England, if we really put our minds to it?** Before the age of cheap oil for transportation, nearly all food was produced locally (for a much smaller population). More recently, during World War II, Americans grew 40% of the fresh vegetables they consumed. They did it in backyard gardens, on rooftops and balconies, and in vacant lots. This presentation on prospects for the New England food system includes some interesting historical perspective as well as thoughts about possible futures: <http://vimeo.com/23705248#at=593>



**Assessing your food system.** You can look at food systems on a global level or focus on a region or even a household . All food systems have the following components. You might start by mapping what is going on in your community:

- production - how and where food is grown or raised
- processing
- storage
- distribution
- preparation
- consumption
- the waste created by the other components

### **What kinds of action are possible?**

The town of Concord Massachusetts undertook an extensive food system assessment that might inspire other towns to do the same: <http://issuu.com/conwaydesign/docs/concordfood2012>.

More on the why's and how's of Food Policy Councils may be found in this manual: <http://www.markwinne.com/wp-content/uploads/2012/09/FPC-manual.pdf>

The Massachusetts Farm to School Project connects local farms to school cafeterias across the state: <http://www.massfarmtoschool.org/resources/community-advocates/>

Young people are involved in an inspiring array of sustainable farming activities, particularly in urban areas. What is happening in your community? The Food Project <http://thefoodproject.org/> is active in a number of Massachusetts communities. One place to learn more about this phenomenon nationwide is at: <http://thefoodproject.org/list-youth-organizations> .

### **Maps**

**Bird's Eye View.** A fun way to start thinking about agriculture in your community is by flying over it using <http://www.bing.com/maps>.

**Historic topo maps** don't tell much about agricultural land use, but still provide interesting insight into a more rural past: <http://docs.unh.edu/nhtopos/nhtopos.htm>

**Oliver.** Oliver, the MassGIS online mapping tool at [http://maps.massgis.state.ma.us/map\\_ol/oliver.php](http://maps.massgis.state.ma.us/map_ol/oliver.php) can be used to map a variety of agriculture-related themes using the *Land Use* data under *Physical Resources*:

- Land use changes since 1971
- Prime Agricultural Soils
- Agriculture Preservation Restriction (APR) protected farmland
- Chapter 61A or 61 lands - land being used for agricultural or forestry purposes
- Farmers markets
- FEMA flood maps (flooding events are more likely under most climate change models. What agricultural lands in your community are affected by a 100 year flood?)

**Team maps.** The Massachusetts Executive Office of Energy & Environmental Affairs will provide registered Envirothon teams with large scale color printed maps of their communities showing agriculture-related information for use in research and presentations at the Envirothon.

**Soil maps.** USDA Natural Resources Conservation Service (originally the Soil Conservation Service) has soil maps and interpretive information for all of Massachusetts available online. You can view or print a soil map and detailed descriptions of the soils in your area, and access soil data for your area, and determine the suitability of the soils for a particular use. The start button for the web soil survey is at: <http://websoilsurvey.sc.egov.usda.gov/>

### **Soil function, soil quality, soil health**

Getting to know the soils of your community, and their value for agriculture, will be an important part of your Current Issue community research this year. How well are these soils able to resist erosion, serve to improve water quality, support plant growth, and maintain moisture content?

**Envirothon Manual.** Start by studying the Soil section of the Mass Envirothon manual (You will need to do this anyway as you prepare for the Envirothon competition!). The manual includes a soil evaluation exercise and suggestions for accessing and using soil survey maps of your area.

**NRCS Web Site.** The Natural Resources Conservation Service (NRCS) has recently opened a new soil health section of their website. The pages offer background on soil organic matter, soil biology, soil quality assessment

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>

The new pages also include resources for educators, including a soil quality assessment kit for educators

[http://nitcnrcsbase-www.nrcs.usda.gov/wps/portal/nrcs/detailfull/soils/health/assessment/?cid=nrcs142p2\\_053873](http://nitcnrcsbase-www.nrcs.usda.gov/wps/portal/nrcs/detailfull/soils/health/assessment/?cid=nrcs142p2_053873)

and soil biology classroom activities: *Earthworm Farm*, *How Fast Does It Rot?*, and *What Lives In Your Soil?*

[http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_051607.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051607.pdf)

A list of resources and publications may be found at:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/resource/>

**Composting.** How-to information on composting – a great way to reduce waste and feed the soil - can be found at:

[http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/newsroom/features/?cid=nrcs143\\_023537](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/newsroom/features/?cid=nrcs143_023537)

<http://www.mass.gov/eea/agencies/massdep/recycle/reduce/composting-yard-and-food-waste.html>

Soil is critical to ecologically sound agriculture. In your presentation to judges at the Envirothon, what will you be able to say authoritatively about Sustainable Local Agriculture if you are not familiar – first-hand – with the soil resources in your community?

### **People**

Talking to people is almost always the best starting place for community research. Organizations that network and advocate for sustainable local agriculture are good resources because they have responsibilities or special interest. Talk

to lots of people! As you get more familiar with the issues and the language that people use to talk about food and agriculture, it will get easier and easier to ask questions. Start with people you already know by some personal connection. Get them to recommend more people, and follow those leads.

**Visiting a farm** and talking with the farmer – urban, suburban, or rural – is likely to be a highlight of your Envirothon community research this year. Be ready to be outdoors and even to do some work! Some farmers are willing to talk, but can't stop their work to do so. Your goal should be to see the land through his/her eyes and heart. If you can visit a farm that raises animals as well as one that grows plants, you will get a more well-rounded picture of sustainable agriculture. Here are some questions to get you started:

- How long have you farmed? How did you learn to farm?
- What are the goals of the farm? What is going well? What are the problems?
- Why do you grow what you grow? How has this changed?
- Where/how does your produce reach consumers? Do you know your consumers?
- What animals and plants share this land with you? In what ways are they helpful? Harmful? What pest management strategies do you use?
- Do you have trees on the farm? What is their value to you?
- Where does your water come from? Where does it flow to? How is it used on the farm?
- What "waste" do you produce on the farm (e.g. manure, plant material)? What happens to it?
- What do you do to ensure soil is functioning well for your purposes? What more would you like to do?
- Where do you get advice? New ideas for your farm?

Visits with other people whose work contributes to economic vitality or food security in your community will give you more rich perspectives on your local food system. Meet with them in their work surroundings – again your goal should be to see the issues through the work that they do. Ask them: What needs to be done to make this a more sustainable food system? Is a local community focus important? Some possible connections:

- A farmers market manager
- A soup kitchen or food pantry manager
- A food service worker
- A public health worker focused on food and nutrition
- A member of a town agricultural commission (<http://www.massagcom.org/>) or other local official
- A land trust representative
- A member of a Food Policy Council

## Libraries

Google is a tempting tool for Current Issue research. But how trustworthy are your internet sources? Your school and public libraries and librarians can help ensure that your sources are current and reliable. You can access a wide range of information from newspapers, magazines, reports, and more through the library:

- 1) From any computer in Massachusetts, including your home (no log on needed):

[www.libraries.state.ma.us](http://www.libraries.state.ma.us)

Suggested resources:

*Opposing Viewpoints in Context*

*Gale Virtual Reference Library* (subject encyclopedias)

2) From any computer, including your home (log on w/ your Boston Public Library E-Card):

Get your free E-Card from the Boston Public Library here:

<http://www.bpl.org/general/circulation/ecards.htm>

Click on Electronic Resources

Suggested resources:

*Boston Globe*

*Global Issues in Context*

3) Public Libraries

Go to the website of your local town/city library.

Look for a link to "electronic resources" or "online resources"

You will be prompted for the barcode on your local library card

### **A Few Helpful Resources and Organizations**

- National Sustainable Agriculture Coalition <http://sustainableagriculture.net/>
- Your state government at work to support agriculture: <http://www.mass.gov/eea/agencies/agr/>
- Mass chapter of the Northeast Organic Farming Association <http://www.nofamass.org/>
- A gateway to food and farm tourism in Massachusetts: <http://www.mass.gov/agr/massgrown/>
- For farms near you, click on *The Farms and Food of Southern New England* in the upper right at: <http://www.farmfresh.org/food/>
- An online food coop: <http://www.masslocalfood.org/>
- Central Mass Local Food <http://www.centralmalocalfood.com/>
- The Boston Natural Areas Network <http://www.bostonnatural.org/>
- Urban agriculture in Boston: <http://growmycitygreen.com/>
- Turning abandoned city lots into thriving gardens <http://citygrowers.wordpress.com/>
- Information on plans for a statewide Food Policy Council for Massachusetts: <http://www.mass.gov/eea/agencies/agr/boards-commissions/food-policy-council.html> and <http://mafoodpolicyalliance.org/>
- Regional Environmental Council of central Massachusetts: <http://www.recworchester.org/>
- Community Involved in Sustaining Agriculture (Conn River valley) <http://www.buylocalfood.org/>
- Mass Association of Agricultural Commissions <http://www.massagcom.org/>
- New Entry Sustainable Farming Project <http://nesfp.org/>

Want to find more local resources? Try googling your town name plus any sustainable agriculture term(s)!