



Healthy Farms, Healthy Environment

State and Local Policies to Improve
Pennsylvania's Food System and Protect
Our Land and Water



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Executive Summary

Pennsylvanians increasingly want healthy, locally grown food that is produced in ways that reflect their values – including protection of the environment. The rapidly rising demand for organic food, the growth in the number of farmers markets and in community-supported agriculture, and the expansion of community gardens across Pennsylvania are all indicators of a deep desire to reclaim our food system.

Policy-makers in Pennsylvania and elsewhere have begun to respond by adopting pioneering policy tools that promote sustainable food economies. But, while Pennsylvania has been an innovator in developing sustainable food policies, it has a long way to go to build a strong local, sustainable agriculture economy in the Keystone State.

Sustainable food economies can reduce the massive impacts of agriculture on our environment, while boosting the value of Pennsylvania farms, promoting food security, and supporting healthy, vibrant communities.

- Organic growing methods have been shown to reduce polluted runoff and energy consumption in agriculture, while boosting the carbon content of soils, according to experiments at the Rodale Institute organic farm laboratory in Kutztown, Pennsylvania.
- Consumption of fresh, local food – as opposed to processed food or produce from halfway around the globe – can reduce the amount of energy used in preserving and trans-

porting food. Farmers can grow and market fresh peas with 60 percent less energy than frozen peas, and 75 percent less energy than packaging peas in an aluminum can.

- Sustainable farming can also help farmers keep farmland in production, despite development pressure, by increasing farm income – thereby protecting open land and the valuable ecosystem services it provides.

Sustainably produced food is rapidly growing in popularity and market share, both in Pennsylvania and elsewhere.

- In 2008, Pennsylvania organic farmers generated more than \$210 million in sales – more than 3 percent of state agricultural value. The number of acres of certified organic farmland in Pennsylvania has increased more than six-fold over the past decade.
- There are approximately 1,200 farmers markets and farm stands in Pennsylvania, an increase of nearly one-third since 2003, as well as more than 260 restaurants in the state dedicated to fresh, locally-grown food.
- People who have adopted a lifestyle based on sustainably-produced food are deeply committed. For example, even during the 2008-2009 recession – the worst since the Great Depression of the 1930s – more than 95 percent of organic consumers continued to buy organic products.

Pennsylvania has been a pioneer in the development of policies to promote sustainable food economies, but can also learn from successful policy innovations in other states.



Farmers can grow and market fresh peas with 75 percent less energy than packaging peas in an aluminum can, helping to prevent global warming pollution.

Pennsylvania has helped *expand the number of organic and local farms and farmers* by:

- Launching the Path to Organic pilot program, which is distributing \$500,000 to help farms transition to certified organic production.
- Continuing support for the Growing Greener program, which has helped protect more than 400,000 acres of farmland through conservation easements.

... and the state can learn from effective policy models elsewhere such as:

- The aggressive land-use planning policies adopted by Oregon in 1973, which have prevented sprawl from overtaking farmland in the Portland metropolitan area. The Portland area remains responsible for 20 percent of the state's agricultural production despite decades of rapid population growth.

Photo: USDA



Pennsylvania has been an innovator in developing a sustainable food system – for instance, by helping to fund Philadelphia's Common Market, a wholesale distributor of local food, pictured here. By scaling up effective programs and adopting the best ideas from other states, Pennsylvania can make greater progress in reducing the impact of agriculture on our environment, boosting the value of Pennsylvania farms, promoting food security, and supporting healthy communities.

- A Woodbury County, Iowa, policy of granting property tax rebates of up to \$5,000 to farmers undergoing the transition to organic production.
- Local policies in cities such as Boston, Cleveland, Milwaukee, Portland, Seattle and San Francisco that make it easier for urban residents to grow food in their yards and on vacant land.

Pennsylvania has ***helped local and organic farmers reach new markets*** by:

- Helping to fund the establishment of Philadelphia's Common Market, a wholesale distributor of local food reaching the institutional market.

- Adopting the Farmers Market Development Act, which authorizes grants to develop or expand farmers markets, increasing farmers' ability to sell directly to local customers.
- Creating the Healthy Farms and Healthy Schools program in 2006, which provides limited grant funding to kindergartens for agricultural education and local food procurement, subject to annual appropriation of funds by the legislature.
- Providing incentives for the purchase of local, fresh food in food assistance programs through efforts such as the Philly Food Bucks program, which offers extra buying power at farmers markets to area residents in need of nutrition assistance, leveraged through federal funding.

... and the state can learn from effective policy models elsewhere such as ...

- Effective farm-to-school and farm-to-institution programs in places such as Washington state. Washington's farm-to-school program, established in 2008, has broadly linked cafeterias in 90 school districts with 60 nearby farms which supply local food for school lunches. The program assists farmers with necessary certifications and allows school districts to purchase food from local farmers even if the price is higher than potentially less healthy food acquired from further away.
- Targets for the purchase of local food by state agencies, such as those adopted by the state of Illinois.
- Grants to improve and connect a regional system of food distribution infrastructure, such as those facilitated by Vermont's Farm to Plate Initiative.

Pennsylvania can ***bring sustainable food advocates into the policy-making process*** and provide ***lasting support*** for sustainable agriculture by following the lead of other states in adopting policies that:

- Create official government offices and authorize food policy councils that identify obstacles to sustainable food economies, coordinate activities across departments and among stakeholders, set priorities, allocate funding, and advocate for necessary policy changes. Vermont's Farm to Plate Network and Illinois' Local Food, Farms and Jobs Council provide potential models.
- Create dedicated funding sources to support initiatives that expand access to healthy food and preserve farmland. For example, Washington, D.C., extended its sales tax to cover soda, generating enough funds to support farm-to-school activities for every school in the district. Maryland, meanwhile, supports its agricultural land preservation programs through a tax on the transfer of agricultural land out of farming.

To create a truly sustainable food system that protects the environment, Pennsylvania must do the following:

- ***Scale up effective programs:*** Programs such as Pennsylvania's "Path to Organic" program hold the promise of increasing the number of farmers using organic

methods, but the program's \$500,000 in funding is only enough to support 13 farmers making the transition to organic. And programs such as Growing Greener have successfully helped to preserve Pennsylvania's farmland resources, but cannot make as much progress with funding set to expire. Expanding sustainable agriculture programs can create new economic opportunities for Pennsylvania farmers while protecting the environment, and so should be a priority for the state, even in difficult economic times.

- ***Adopt the best ideas from other states:*** In particular, Pennsylvania should adopt a set of overarching goals to guide the state's policy-making in sustainable agriculture and food systems, along the lines of Vermont's Farm to Plate Initiative or Illinois' Food, Farms and Jobs Act.
- ***Innovate in areas that other states have failed to address:*** In particular, there is room for Pennsylvania to take leadership in providing consistent and stable funding for sustainable agriculture activities, possibly through a food system infrastructure bank.
- ***Increase the focus on sustainability:*** Expanding local and organic agriculture is a critical step toward a food system that preserves and protects our natural environment. However, to maximize environmental benefit, Pennsylvania should increasingly incorporate specific sustainability performance criteria to guide overall investment in our food supply.

Introduction

Years ago, most Americans produced some or all of their own food. On the eve of World War II, roughly 30 percent of citizens were farmers.¹ Even people living in cities often knew their milkman, their butcher and their baker – and had a close connection with the places where their food came from and how it was produced.

During the war, American industry reduced fertilizer manufacturing and instead produced bombs and ammunition. As farmers scaled back, citizens planted “victory gardens” in their yards, on rooftops, and in neighborhood parks to increase access to food. They saw local agriculture as an intensely patriotic act that everyone could participate in.

The U.S. Department of Agriculture, through the land grant university system and its extension offices located all across

the country, provided seed, fertilizer and simple tools to victory gardeners. In 1943, roughly 20 million victory gardens produced more than 40 percent of the nation’s total vegetable harvest.²

Today, however, our connection with our food supply is much more remote. Less than 2 percent of Americans work on a farm.³ Many people do not encounter food production outside of groceries, corner stores, or restaurants. And if they did tour a typical farm, they would encounter animals overcrowded in factory-like conditions, and vast plantations of single crops like corn. Those farms are linked to consumers through a global network of transportation and processing facilities, all subject to a level of corporate control that yesterday’s farmers would not recognize.

Poster: U.S. Department of Agriculture, 1945



A growing movement is now attempting to reconnect American citizens to their food supply. Citizens, farmers and others are hungry for alternatives to today's dominant style of industrial agriculture. Through decades of grassroots activity, these enterprising groups have created a real movement for a sustainable food system.

We are reaching a historic tipping point in the evolution of agriculture. People are planting victory gardens again. Chefs on the Food Network are talking about the joys of a locally-produced, seasonal diet. Increasing numbers of people are expressing their values through their food shopping habits, supporting their local economies and supporting agricultural practices that reduce their exposure to unhealthy pesticides. More and more individuals are seeing their participation in the food economy as a political act.

For those who care about the impact of agriculture on our environment, this movement offers a great deal of hope. It offers an opportunity to build a new kind of food production that will reduce the size and severity of the runoff-driven dead zones in the Chesapeake Bay and the Gulf of Mexico, and off the Jersey Shore; cut our exposure to toxic pesticides and protect our health; help preserve limited supplies of fresh water, fertile soil, and open spaces for the needs of all generations; and reduce the threat of global warming.

At the same time, sustainable agriculture can help to solve economic, food security, and public health problems by providing diverse, healthy, fresh food, keeping more dollars in local economies, strengthening local community bonds, revitalizing blighted areas, and creating jobs.

The logical next step in building the sustainable agriculture movement is to shift the focus of government policy away from encouraging unsustainable methods

During World War II, citizens viewed growing their own food as a patriotic act. Now, after decades of grassroots activity, public consciousness of the importance of a sustainable and local food supply is rapidly returning, creating opportunities to reduce the impact of food production on our environment.

of agricultural production and toward the development of new food systems that are better for the environment, for farmers, for rural communities, for food security and for consumers. Many important decisions are made at the federal level through vehicles like the Farm Bill. But, state and local government policies can also play a crucial role in enabling the development of sustainable regional food systems, bringing successful growth models to scale as rapidly as possible, and



The sustainable agriculture movement offers an opportunity to protect Pennsylvania's environment, while simultaneously providing diverse, healthy, fresh food, keeping more dollars in local economies, strengthening local community bonds, revitalizing blighted areas, and creating jobs.

expanding the political constituency for better ways of producing and distributing our food.

This white paper profiles leading policy ideas that can encourage sustainable agricultural production, beginning at the farm and ending in kitchens across the state. These ideas, if put into action,

can ensure that Pennsylvania's great agriculture tradition will continue to be a central part of the Commonwealth's economy and identity, while protecting our air, water and open spaces for generations to come.

Sustainable Farming and Food: Enhancing Pennsylvania's Environment

America's system of industrial agriculture depends heavily on synthetic chemicals and oil. This system pollutes our rivers, lakes and streams with excessive amounts of nutrients and pesticides, increases global warming pollution, harms our health, and reduces the long-term fertility of our soil.

Environmentalists have long responded to these threats by calling for stronger regulations to limit the impact of industrial agriculture on our environment – such as bans on the most dangerous pesticides, enforceable limits on the amount of nutrient pollution that can reach waterways, and programs that encourage farmers to use “best practices” to curb pollution.

At the same time, however, pioneering farmers, committed consumers, and engaged communities have sought to

build parallel, sustainable food systems that challenge the core foundations of the industrial food system – including the reliance on chemical fertilizers and pesticides, the long-distance shipping of food around the globe, and the centrality of major corporations in the organization and operation of that system.

People come to the sustainable food movement for a variety of reasons. For some, it is a way to obtain healthy food for themselves and their families. For others, it is a way to strike out against inhumane treatment of animals or of workers in the fields. For still others, participation in a farmers market or community-supported agriculture is a way to reconnect with one’s neighbors and rebuild a sense of community.

For many consumers, however, environmental concerns – including the heavy burden that industrial agricul-

Photo: NASA



This satellite image shows the Chesapeake Bay, the nation's largest estuary. Agricultural activities in the Bay watershed, particularly chicken farming, contribute to nutrient pollution, low oxygen levels and dead zones – damaging the Bay ecosystem.

ture places on our waterways and our climate – are a major motivating force for seeking out sustainably grown and processed food. Thoughtfully designed public policy – including policies adopted at the state level – can help Pennsylvania develop sustainable food systems that, working alongside strong environmental regulations, can help protect the environment of the Keystone State and the nation for decades to come.

What Are Sustainable Farming and Food?

There is no perfect or universally accepted definition of “**sustainable farming**.” The definition adopted by the federal government in 1990, however, provides a good starting point.

“Sustainable agriculture” was defined as “an integrated system of plant and animal production practices having a site-specific application that will over the long-term:

- Satisfy human food and fiber needs;
- Enhance environmental quality and the natural resource base upon which the agriculture economy depends;
- Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
- Sustain the economic viability of farm operations; and
- Enhance the quality of life for farmers and society as a whole.”⁴

Sustainable food systems are those that support and encourage sustainable agriculture, while also incorporating values of sustainability into the transportation, processing, distribution and consumption of food.

This report will focus on the environmental aspects of sustainability – particularly the ways in which agriculture affects Pennsylvania’s air, water and land. Many

definitions of sustainability, however, also incorporate workers' rights, the development of vibrant community institutions, human health and other important considerations.

Do "Local" and "Organic" Equal "Sustainable"?

In many sustainable food systems, consumers are able to develop one-to-one relationships with farmers, empowering consumers to better understand how their food is produced, and to choose to support producers whose practices reflect their values.

Many consumers who want their food choices to support a healthy environment, however, are dependent on product labels or certifications to help them make good decisions. Similarly, public policies that seek to support the development of sustainable food systems must have good definitions to separate those practices that should receive public support from those that should not.

"Local" and "organic" are two terms often used by consumers and policymakers to mark agricultural practices and products that are environmentally preferred.

Local generally refers to food that is marketed in the same general region where it was grown. There is no firm definition of "local" food or legal standard governing the use of the term. To different people, "local food" could mean food grown in one's own town, in one's own state, or in a particular region of the country. In 2005, four women, including San Francisco Bay Area chef Jessica Prentice, challenged people to limit their diet to foods produced within 100 miles of home for one month as a part of World Environmental Day.⁵ They coined the term "locavore" to describe this dietary

practice. The concept became popular, and two years later, the New Oxford American Dictionary chose "locavore" as its word of the year.⁶ Other advocates use the term "foodshed" to describe a geographically consistent area where a population has a direct connection to sources of food, much like rivers in a watershed derive their flow from nearby headwater streams. In Pennsylvania, the Delaware Valley Regional Planning Commission has defined the regional foodshed as an area consisting of 70 counties in 5 states (Pennsylvania, New Jersey, New York, Maryland and Delaware) within a 100 mile radius of Center City Philadelphia.⁷

Organic farming is the only aspect of sustainable agriculture that is officially regulated by the federal government. As organic food became more widely available in the 1990s, and as concerns about mislabeling spread, the U.S. Department of Agriculture created an official set of standards and began officially certifying organic farms in 2002.

To earn the USDA "certified organic" label, a farm or food processor must:⁸

- Refrain from using most synthetic (or fossil fuel-derived) pesticides and fertilizers;
- Use no antibiotic drugs, genetically engineered plants, or fertilizers containing sewage sludge;
- Maintain food safety without the use of irradiation;
- Ensure that livestock feed is 100 percent organic and contains no animal byproducts or growth hormones;
- Give all livestock "access to the outdoors;" and
- Ensure that any processed food product labeled "organic" contains at least 95 percent organic ingredients.

The process of undergoing official certification as an organic farm requires three years of record-keeping, an audit by a USDA-recognized contractor, and a certification fee.

Food that is produced locally and using organic methods is *more likely* to be environmentally sustainable, all other things being equal. But local and/or organic production is no guarantee of sustainability. Organic farms, for example, may still over-apply natural fertilizers – such as manure – in ways that contribute to water quality problems downstream. Small-scale, local farms can also engage in environmentally destructive practices, such as allowing animals to enter into and degrade streams. To make matters more complicated, well-run conventional farms that are neither “local” nor “organic” may nonetheless use environmentally friendly practices to minimize pollution runoff or to reduce the use of chemical inputs as much as possible.

In short, there is no perfect label or certification that guarantees that an agricultural product has been produced “sustainably.” But state policies that encourage the development of local food systems *and* the spread of organic agriculture will *tend* to promote sustainability, and may serve as a good foundation for better-refined policy approaches in the future.

How Sustainable Farms and Food Can Protect the Environment

Sustainable agriculture and food systems can protect and enhance Pennsylvania’s environment in numerous ways.

Clean Water

Conventional industrial-scale farming techniques impose a heavy – and growing

– toll on waterways in Pennsylvania and across the nation as a whole.

The Pennsylvania Department of Environmental Protection reports that more than 16,000 of the stream-miles it has been able to survey are unable to support a healthy range of aquatic life. Nearly a third of those streams are primarily affected by agricultural pollution.⁹ Placed end-to-end, they would exceed the distance to drive from Pittsburgh to Las Vegas and back.

Agriculture’s toll on water extends far beyond Pennsylvania. According to the U.S. Environmental Protection Agency (EPA), pollution from agriculture contributes to poor water quality in more than 100,000 miles of rivers and streams nationally, along with 2,500 square miles of lakes and 2,900 square miles of estuaries.¹⁰ These waters are so polluted that they are unsafe for fishing, swimming, or the maintenance of healthy populations of wildlife.

Off our coasts, the number of documented areas of low dissolved oxygen – often called “dead zones” because oxygen levels are too low to support marine life – has increased from 12 in 1960 to 300 today, coinciding with the expansion of industrial agribusiness.¹¹ This includes the dead zone in the Chesapeake Bay. Almost 90 percent of the Bay failed to meet standards for dissolved oxygen during the summers from 2007 to 2009 – severely damaging oyster and blue crab populations.¹²

Agricultural water pollution finds its way into waterways through runoff from farm fields or discharges from subsurface tile drainage systems, which carry pollution from farm fields into nearby waterways, some of which can even reach drinking water systems. Animal waste from factory farms, for example, might be sprayed on nearby fields and wash off into a nearby river, carrying bacteria and polluting nutrients with it. Or, pesticides



In June 2010, U.S. Agriculture Deputy Secretary Kathleen Merrigan visited the Eby-Patterson farm near Hershey, PA, where sustainable conservation techniques help to keep pollution out of the creek and improve the health of the Chesapeake Bay.

applied to fields might wash off into waterways and impact the plants, animals, and humans that use that water.

Sustainable farming and food systems can protect water quality in streams, rivers and lakes.

Sustainable growing methods encourage the growth and development of a rich ecosystem of micro-organisms in soil, creating fertile, sponge-like ground which holds nutrients and soaks up rainwater. These methods include using cover crops and complex crop rotations tailored to the local environment, and using compost in measured amounts as fertilizer, rather than raw manure, sewage sludge or synthetic fertilizers in careless quantities.¹³

Using these methods, a sustainable farm can reduce its impact on water quality compared to a conventional

farm, with less nitrogen leaching, more efficient nutrient capture and cycling, and less runoff and erosion.¹⁴ An ongoing 30-year experiment at the Rodale Institute, an organic farm laboratory near Kutztown, PA, demonstrated these benefits by testing runoff from a plot of organically-grown corn placed side-by-side with conventional crops.

- The organic field absorbed 15 to 20 percent more water than the conventional field, increasing groundwater recharge and reducing runoff volumes.¹⁵
- Runoff from the conventional field was more likely to contain high levels of nutrients, more frequently exceeding the legal drinking water contamination standard for nitrates of 10 parts per million.¹⁶

- Runoff from the organic field contained no herbicides. In contrast, runoff from the conventional field contained atrazine, a chemical that can interfere with growth and development in humans and wildlife, at levels known to produce reproductive abnormalities in frogs.¹⁷

The development of robust local food systems can also improve water quality by shifting animal production away from concentrated animal feeding operations (CAFOs), which generate massive quantities of manure that often find their way into local rivers and streams, and toward small-scale livestock operations that are integrated with crop production and dispersed across the landscape. These smaller-scale operations may also be less dependent on antibiotics or other chemicals that can find their way into rivers, streams and lakes.

Energy and Global Warming

Corporate agribusiness is a major contributor to America's dependence on fossil fuels and emissions of global warming pollution.

Agriculture is a major consumer of energy. Twenty percent of the fossil fuels used in the United States go towards our food system.¹⁸ About one-fifth of that energy goes into producing food, including shipping chemical inputs and operating farm machinery. The remainder goes toward packaging, shipping, storing and preparing food.¹⁹

The U.S. food system produces global warming pollution through the use of fossil fuels for energy, the excessive application of fertilizer to soils, and from livestock and livestock waste. Additionally, agricultural practices can affect the amount of nitrous oxide and

carbon dioxide – key global warming pollutants – retained in or emitted from plants and soil.

Sustainable agriculture and food systems can reduce agriculture's contribution to global warming and fossil fuel dependence.

According to an analysis of the Rodale Institute farm by researchers from Cornell University, organic corn and soybeans can be grown with 30 percent less energy than conventional versions, while producing the same yield.²⁰

Sustainable agriculture can also reduce the emissions of nitrous oxide from the soil. When excessive amounts of nitrogen are applied to soil in fertilizer, microbes can convert it into nitrous oxide. Sustainable agriculture produces healthier nutrient balances in the soil and can reduce emissions of this strong global warming pollutant.

Sustainable methods can also increase the ability of soil to capture and retain carbon dioxide by maintaining a healthy soil ecosystem. The Pew Center on Global Climate Change estimates that better management of U.S. cropland could increase the amount of carbon trapped in the soil by the equivalent of 4 to 15 percent of total U.S. annual carbon emissions, helping to slow the pace of global warming.²¹

Once food leaves the farm, local marketing can be an important tool to prevent global warming pollution in several ways. First, local marketing can reduce the distance that food travels before consumption, reducing the amount of energy that must be used to transport it. Second, if foods are consumed on a seasonal basis, when they are locally available, the need for energy-intensive packaging, preservation and storage declines.

In order for local marketing to reduce global warming pollution from transportation, it must be more efficient than the



A sustainable food system can help reduce global warming pollution by increasing the ability of soil to capture and retain carbon dioxide (through techniques including the use of compost as fertilizer, as pictured here) and by reducing energy needs for food packaging, shipping and storage.

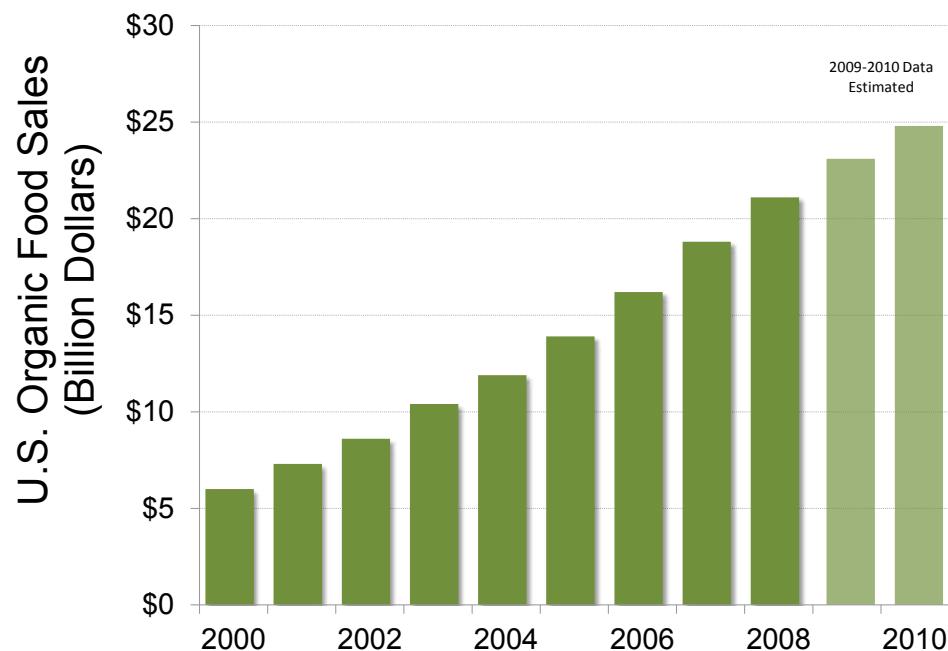
conventional food distribution system. In the United States, a typical food item travels more than 1,500 miles from the farm to the kitchen.²² Some food items travel in particularly inefficient ways – such as fresh fruit or vegetables from the Southern Hemisphere transported in refrigerated cargo planes. Food items transported by diesel trucks have lower – but still substantial – per-unit global warming impacts, while food transported by cargo ship can have very low per-unit impact.²³

A local food distribution system designed with an eye toward efficiency holds the promise of cutting energy use and thus global warming emissions and

air pollution. However, the system must be designed with efficiency in mind – for example, a haphazard system relying on individuals to drive out to farms on a regular basis to pick up their produce could actually increase emissions.²⁴

Perhaps more important in terms of preventing global warming pollution, local marketing of food based on seasonal availability can reduce the energy needed for packaging, preservation and storage. For example, farmers can grow and market fresh peas with 60 percent less energy than that used to grow and market frozen peas, and 75 percent less energy than packaging peas in an aluminum can.²⁵ Fresh food requires no special

Figure 1: Organic Food Sales Increased Steadily Throughout the 2000s and Now Exceed \$25 Billion per Year²⁷



packaging or storage if consumed soon after it is picked – a timeline that local marketing makes possible.

Open Space

Farming is not an inherently polluting activity. On the contrary, farming at its best plays a critical role in preserving open space, safeguarding habitat for wildlife, absorbing stormwater, storing carbon from the atmosphere, and providing any number of other “ecosystem services” that are collectively worth billions of dollars for our society.²⁶

However, over the past several decades, Pennsylvania’s family farms – which are the bedrock of the state’s rural landscape – have been threatened by the forces of agribusiness consolidation and sprawling development. From 1982 to 2007, 1.5 million acres of Pennsylvania

farmland and pastureland (more than 17 percent of the state total) were developed for other uses.²⁷

By increasing the ability of farmers to succeed economically, the development of sustainable food systems can help to preserve working farm landscapes, protecting open spaces and the important ecosystem services they provide.

For instance, the Pennsylvania Association for Sustainable Agriculture estimates that if every household in Pennsylvania spent \$10 per week on regionally-produced food, it would inject \$48 million more *per week* into the local economy – adding up to \$2.5 billion per year.²⁸

That is a significant amount of money – much more than the state’s annual budget for farmland preservation. Increasing the income of farmers can be an important tool to enable farmers to continue farming.

The Sustainable Food Movement in Pennsylvania

Across Pennsylvania and throughout America, consumers are rethinking their relationship with food. More than ever, people are realizing that food matters. Fresh, locally-grown food tastes good. Organic farming methods produce healthy food without the use of harmful chemicals. And, for a growing number of people, food choices are also an expression of ethical, social and environmental concerns. People increasingly want their diets to match their values.

The ongoing revolution in America's food habits creates the potential to reshape the way America grows, processes, distributes and consumes food – and thus better protect the natural environment. These changes are already beginning to take place, as more Pennsylvania farmers switch to organic production and/or take part in local food economies outside the dominant industrial agricultural system – often realizing economic benefits in the process.

Pennsylvanians Are Hungry for Sustainably-Produced Food

Pennsylvanians are increasingly hungry for sustainably-produced food that reflects their environmental values. While there are no perfect measures of this trend, increasing sales of organic and locally-produced foods are a good measure of the explosive growth of the movement. Nearly eight in 10 consumers believe that organic food is better for the environment, while roughly seven in 10 consumers believe that small-scale farms are more likely to use techniques that are safe for the environment than are large-scale farms.²⁹ Therefore, the rapid growth in demand for organic and local food can be understood – at least in part – as an outgrowth of consumers' environmental values.

As demand for local and organic food has grown, farmers have responded, with increasing numbers pursuing organic certification, entering community-supported agriculture arrangements, and supplying farmers markets.

Photo: Rob Swatski



Farming at its best plays a critical role in preserving open space and the ecosystem services it provides.

Sustainable Agriculture Benefits Pennsylvania Communities

Besides reducing the environmental impact of agriculture, local and organic farming techniques can help strengthen the local economy, support farmers, and build community.

- **Fresh, locally grown food tastes good and is healthier than processed food.** Organic produce tends to contain higher levels of vitamins, antioxidants and minerals, including vitamin C, iron, and magnesium.⁵³ The Organic Center, reviewing scientific literature comparing the nutritional value of conventional vs. organic crops, found that organic produce on average was 25 percent more nutrient-dense.⁵⁴ Local marketing of food enhances nutrient value as well, since freshly picked foods retain more nutrients than processed food products.⁵⁵
- **Local markets enhance community.** Farmers markets and local food outlets provide enhanced opportunities to make connections with neighbors and with the people who grow food. For example, scientists from the University of California at Davis found that the odds of a supermarket shopper having a conversation with another shopper were about 1 in 10, while shoppers at a farmers market talked to at least one other shopper nearly 7 out of 10 times.⁵⁶
- **Spending on local businesses strengthens the local economy.** Spending at a local business creates income, jobs and opportunities across the local economy. Local businesses are much more likely to shop for goods and services – from banking to labor – at other local businesses. As a result, a dollar spent on local goods is more likely to stay within the community, creating multiplier effects that benefit everyone, instead of being siphoned off to a corporate headquarters far away. The Institute for Local Self Reliance reports that spending a dollar locally generates about three times as much benefit for the local economy as spending a dollar at a larger, more distant business.⁵⁷
- **Farmers who are marketing local or organic products capture more of the profit from their labor.** In the 1970s, farmers received about 32 cents for every dollar spent on food. Today, farmers capture only 16 cents or less.⁵⁸ About 73 cents of a typical dollar spent on food goes to pay for distribution.⁵⁹ By reducing distribution and processing needs, farmers can capture more of the value of their labor. At a farmers market, for example, a farmer can keep up to 90 cents of each dollar spent by shoppers.⁶⁰



Pennsylvanians are increasingly hungry for fresh, locally grown food, like these tomatoes from the Clark Park Farmers Market in Philadelphia.

Nationally, the organic food market is likely to exceed \$25 billion in 2011, and is expected to continue to grow into the future.³⁰ Demand for organic food products climbed 20 percent or more annually through the 1990s and continued to grow at double-digit rates at least until the recession struck in 2008.³¹ (See Figure 1, page 18.)

People who have switched to organic food are deeply committed to the change. Even during the recession – the worst since the Great Depression of the 1930s – the market for organic food continued to grow. One market research firm found that only 3 percent of consumers stopped buying organic products altogether during the recession, and nearly half continued spending the same amount on organic products.³²

Researchers at the U.S. Department of Agriculture have concluded that “organic products have shifted from being a lifestyle choice for a small share of

consumers to being consumed at least occasionally by a majority of Americans.”³³ By 2010, more than two-thirds of all U.S. households purchased at least some organic products in their food shopping.³⁴ According to surveys of people who purchase organic food, their primary reasons for doing so include their health, the health of the environment, and animal welfare.³⁵

The market for locally grown food is also growing rapidly. In 2007, Market Research Group estimated that the market for foods distinguished as local had hit \$5 billion annually in the United States by 2007, and projected the market to grow to \$7 billion annually by 2011.³⁶

Changes in Pennsylvania’s Food System

The increasing demand for food considered environmentally sustainable has led to rapid – though still marginal

– changes in the ways Pennsylvania farmers grow food and the way that food reaches consumers. Consider the following:

- The amount of farmland in organic production in Pennsylvania increased more than six-fold between 1997 and 2008.³⁸ Over the same period of time, farmers increased their production of certified organic livestock 12-fold and their production of certified organic poultry 27-fold.³⁹
- In 2008, Pennsylvania organic farmers generated more than \$210 million in sales – more than 3 percent of state agricultural value.⁴⁰ Pennsylvania ranked third in organic sales, behind California and Washington.⁴¹ An average organic farm in Pennsylvania sold \$386,000 in produce, compared to the statewide average of \$91,900 per farm.⁴² Sixty-five percent of organic farms in Pennsylvania sold their goods within 100 miles of the farm.⁴³
- 7,500 Pennsylvania farm operations market their produce directly to consumers, ranking Pennsylvania third in the nation behind only California and New York.⁴⁴ The number of farms using direct marketing increased by nearly 25 percent from 2002 to 2007, with annual direct sales averaging \$10,000 per farm.⁴⁵
- There are now approximately 1,200 farmers markets and farm stands in Pennsylvania, an increase of more than one-third since 2003.⁴⁶ Nationally, the number of farmers markets has

more than doubled in the last decade and continues to grow.⁴⁷

- The Pennsylvania Buy Fresh, Buy Local marketing campaign has registered more than 260 restaurants dedicated to fresh, locally-grown food as of August 2012.⁴⁸
- The number of community supported agriculture businesses, also called CSAs or farm shares, is also growing. In a CSA, a customer can invest in a farm's seasonal production in exchange for a share of what it generates. In 1986, there were just two CSAs in the United States.⁴⁹ By 2000, an online directory of local food sources called Local Harvest had registered 374 CSAs.⁵⁰ As of March 2012, the Local Harvest CSA directory contained more than 4,800 listings – growing more than 10-fold over the past decade.⁵¹ More than 250 CSAs are registered in Pennsylvania.⁵²
- Urban gardens are rapidly sprouting up, from the Pennsylvania Horticultural Society's Growers' Alliance, which helped 15 urban farmers grow more than 9,000 pounds of food in 2010 for a co-op market in Philadelphia, to Braddock Farms, located on a plot of land near a steel mill outside Pittsburgh. (See page 28 for further discussion.)

These changes, while important, are still small. They are, however, creating benefits for Pennsylvanians – whether they are urban residents seeking fresh food or family farmers seeking new economic opportunities. Smart public policies can help Pennsylvania take the next step in the development of local food systems that are true hallmarks of environmental sustainability.

Using Public Policy to Promote Sustainable Farming and Food

The strong and growing movement around local and organic agriculture has begun to transform our food system. Innovations at the grassroots level are widespread, characterized by creativity, passion, and entrepreneurial spirit.

The movement has brought society to the point where we can begin to consider the possibility of designing an agricultural system to support the long-term health and well-being of ourselves and our environment. Going forward, the challenge will be to take many of the innovations that are occurring at the grassroots level and bring them to scale – and to ensure that consumers’ desire for food that reflects their values results in real change on the farm and in our communities.

Public policy will play a crucial role in nurturing a new sustainable food system.

Pennsylvania has established itself as an innovator in many areas of sustainable food policy, but still has much to learn from other states and a long way to go in tapping the potential of sustainable farming to improve the state’s environment and our way of life.

As we explore in this section, state and local governments in Pennsylvania and across the country have developed dozens of effective policy approaches to accelerate the growth of local and sustainable agriculture. These policies support sustainable food production by increasing the number of sustainable farms and farmers; providing new market opportunities for sustainably grown food; and providing a platform for continued advances in sustainable farm and food policy.

Increasing the Number of Sustainable Farms and Farmers

In order to have sustainable, fresh and local food, a society first needs:

1. Farmers to grow the food;
2. Land for farmers to cultivate in relatively close proximity to a suitable market;
3. Support for farmers to use sustainable instead of conventional farming techniques.

States and local governments have pioneered policy approaches to meet all of these needs.

Educating and Supporting New Farmers

The average age of a farmer in the Pennsylvania today is 55 years. Since the 1930s, the country has lost more than 4 million small farms. As fewer young people have entered into the profession, the age of the typical farmer has been climbing.⁶¹

Increasing the scale of sustainable farming will require introducing skilled new farmers to the field.

- Pennsylvania operates a Center for Farm Transitions, which provides a variety of services to farmers, including helping new farmers become established in the field. While the program does not have an exclusive focus on sustainable methods, it does provide advice for farmers seeking to enhance their income opportunities through transitioning to certified organic production or developing a local marketing plan.⁶²

Several other states and cities have taken steps toward this goal, including:

- The City of New York, in partnership with several foundations and the U.S. Department of Agriculture, funds a program designed to introduce immigrants to organic farming. The “New Farmer Development Program,” as it is known, was founded by a non-profit called Grow NYC and by Cornell University’s extension program in 2000. It has trained more than 130 individuals in farming techniques and business strategies, and has helped 16 individuals and their families launch businesses serving 40 separate farmers markets from northeastern Pennsylvania to the greater New York City metropolitan area.⁶³

- Connecticut, Illinois and New Mexico have considered policies that would provide tax incentives for the sale of land to new farmers, establish an agricultural education scholarship award, or provide grants to school districts or university extension systems for the creation and support of organic farming education programs.⁶⁴ These approaches could increase the number of sustainable farmers and facilitate their ability to launch a successful operation.

Good programs are accessible, well-funded, and provide aspiring farmers with education on sustainable practices, needed resources, or assistance with acquiring suitable farmland.

Helping Farmers Convert from Conventional to Organic Production or to Maintain Organic Status

Encouraging existing conventional farmers to switch to organic methods is another possible step toward increasing the market penetration of sustainable

agriculture. The official USDA organic certification process takes at least three years to complete. During that period, farmers cannot yet command the price premium that organic certification would allow, while facing new and different costs, and potentially decreased yields before organic techniques restore a healthy soil ecosystem.⁶⁵

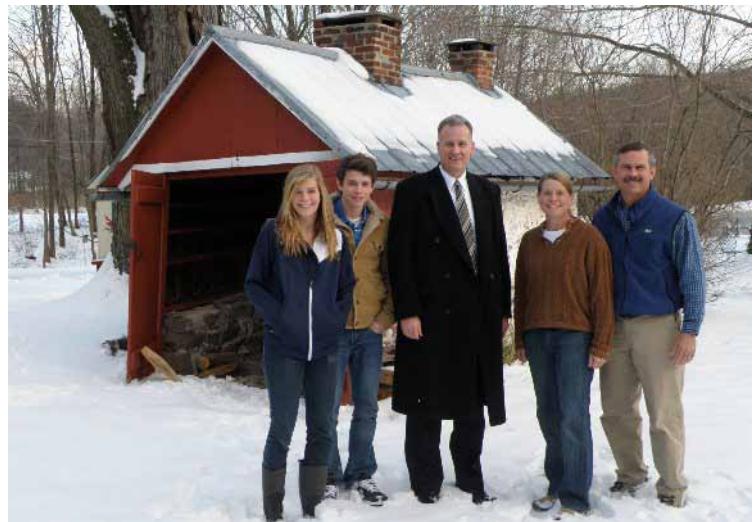
Financial and technical support can make it more likely that farmers will consider undergoing this process.

Pennsylvania's Path to Organic program is a model policy to encourage a shift toward organic methods. Launched in 2009, the program offers financial and technical assistance to farmers undergoing or considering organic certification. Using a \$500,000 appropriation, the program is working to help 13 farms across the state manage the three-year transition to organic production, plus meet the challenges of the first year of marketing certified organic products. Each farm will receive up to \$30,000 over a four-year period, not to exceed \$7,500 in any single year.⁶⁶

In addition to the grant money, participating farms are benefiting from technical assistance to minimize yield drop while restoring soil ecosystems – including assistance with advanced crop rotation strategies, crop variety selection, and suppression of weeds with cover crops. Technical assistance also extends to developing effective marketing strategies and maximizing farm income with new organic products.⁶⁷

Importantly, the Path to Organic program is specifically designed to support environmental sustainability goals. A dozen of the participating farms are in the Chesapeake Bay watershed, the site of an extensive effort to reduce the amount of nutrient overloading in waterways. The program prioritized grants to farms in this area, in part to collect data demonstrating that organic agriculture

Photo: Rodale Institute



Pennsylvania's Path to Organic program is helping Oley Valley Organics, owned by the Dietrich Family (shown here with former Representative David Kessler), to manage launching organic vegetable and berry production and to develop a more sophisticated marketing plan.

techniques can reduce nutrient runoff and help the state comply with its obligations under a regional plan to clean up the Bay.⁶⁸

Additionally, the Pennsylvania Department of Agriculture is periodically testing soil carbon storage at each farm. The data collected may help farmers develop new income streams around carbon markets such as the Chicago Climate Exchange.⁶⁹ The experience will also prepare the Department of Agriculture's Center for Farm Transitions to work with other farmers wishing to make the shift to organic.

There is a great deal of opportunity for a policy like this to do more. Pennsylvania has more than 63,000 farms, approximately 600 of which are certified organic.⁷⁰ Many more farms could potentially make the switch to organic production, or launch as new organic operations, with appropriate support.

Other jurisdictions across the nation are also taking strides to help farmers transition to organic production:

- Many states offer more limited assistance with fees associated with organic certification, including Kansas, Minnesota, Michigan, Illinois, Indiana, Texas, New York, and Vermont.⁷¹
- At the local government level, in 2005, Woodbury County, Iowa, became the first county in the nation to offer support for farmers making the transition to organic production. The county Organics Conversion Policy offers property tax rebates of up to a total of \$50,000 annually for up to five years to help offset any temporary losses in productivity or any marketing hiccups that could occur while re-inventing the farm.⁷²

The tax rebate is limited in that no one recipient can claim more than 20 percent of the total amount. An Organics Conversion Board evaluates applications from individual farmers to determine the allocation of property tax rebates. Rebates apply to land zoned for agriculture only, not to houses or other improvements. They apply to conventional farmland transitioning to organic production, or fallow land becoming an organic farm. The tax rebates also require participants to obtain official USDA organic certification and maintain it for two years in order to be eligible.⁷³

Woodbury County has also crafted a complementary purchasing policy requiring county departments to buy local and organic food products before turning to other sources. (See page 35 for further discussion.)

While these programs have induced only a handful of farmers to convert – largely because the region is populated by huge farms that receive millions in federal subsidies to grow

corn and soybeans – the principle of the policy is unique and innovative. Moreover, it has helped the county to attract an organic soybean processing plant, an important contribution to the local economy.⁷⁴ There is great potential for policies like this to do more, especially as part of a broad and integrated fabric of policy support for sustainable agriculture.

Gaining and Preserving Access to Land

In order for farmers to provide food for local markets, they must have access to farmland within a reasonable distance of an urban center. Yet development threatens agriculture by consuming cropland: from 1982 to 2007, 1.5 million acres of Pennsylvania farmland and pastureland (more than 17 percent of the state total) were developed for other uses.⁷⁵

In economically challenged areas of Pennsylvania cities, meanwhile, there is an intense desire among local residents for greater access to healthy food. Urban agriculture on vacant lots provides an opportunity to build stronger and healthier communities – but only if community residents can gain access to land.

Well-designed public policies can help to preserve high quality farmland near markets and open the door for urban agriculture.

Agricultural Land Preservation

Pennsylvania has engaged in farmland preservation through the Agricultural Conservation Easement Purchase Program, which has protected more than 400,000 acres of farmland statewide. The program provides farm families with income in exchange for a commitment to keep the farm in productive use. Much of the funding for the program came from Growing Greener, an environmental pro-

gram based on a fee on municipal waste and a voter-approved bond.⁷⁶ However, Growing Greener funding is running out, even as 2,000 farm families and 240,000 acres of farmland sit on waiting lists for conservation easements.⁷⁷

While Pennsylvania's program has achieved notable success, it relies on the availability of funding and on the decisions of individual landowners, and thus it can fail to protect farmland in a systematic way. The program could better support and optimize a system for the local production of food by focusing in a planned way on the most fertile lands closest to population centers.

Other states and cities have taken novel approaches to preserving land in agricultural production.

- Oregon's land-use planning policies – first enacted in 1973 – show the potential for public policy to ensure the survival and growth of a diverse local food system.

The state's land-use policies require cities and counties to adopt comprehensive growth plans that are consistent with state goals and update their zoning ordinances to match the plans.⁷⁸ The third goal directly addressed farmland preservation:

The preservation of a maximum amount of the limited supply of agricultural land is necessary to the conservation of the state's economic resources and the preservation of land in large blocks is necessary in maintaining the agricultural economy of the state and for the assurance of adequate, healthful and nutritious food for the people of this state and the nation.⁷⁹

To achieve this goal, Oregon's land use planning guidelines require strong urban growth boundaries, which offer a clear demarcation between areas intended to be kept

rural and those that can be developed more densely. The policy also establishes specific protections for "prime agricultural land" and areas zoned for "exclusive farm use," comprising more than 16 million acres of the state.⁸⁰

These clear urban boundaries have helped to foster more compact development and preserve wide tracts of agricultural land shielded from development pressure. As a result, even though the population of the Portland metropolitan area increased by more than 1 million people since 1980, so did the number of farms and the amount of land in agriculture.⁸¹ Farmers in the Portland metropolitan area have easy access to a large market, and residents have easy access to farms. It is no coincidence that the Portland metropolitan area is one of the most productive parts of the state's agricultural economy, generating 20 percent of the total agricultural value of the entire state of Oregon.⁸²

Urban Agriculture

On the opposite side of the spectrum, in urban areas, agriculture can be an important tool for improving quality of life and providing access to open space.

Urban agriculture has a long history in Pennsylvania. In the 1800s, Philadelphia had a Vacant Lot Cultivation Commission.⁸³ In the 1940s, the city established the W.B. Saul High School of Agricultural Sciences, the nation's largest agricultural high school.⁸⁴ In the 1970s and 1980s, the city supported urban gardens as a way to fight neighborhood blight, although that support faltered in the 1990s.⁸⁵ Today, Philadelphia is home to a variety of urban agriculture efforts, including a farm on a



The non-profit Grow Pittsburgh transformed abandoned lots in the borough of Braddock into an urban organic farm in 2007.

former brownfield the size of a city block (Greensgrow), school gardens, a farm at the Schuylkill Center, and a farm managed by the Weavers Way Co-op grocery store.⁸⁶

Philadelphia’s “Greenworks” initiative establishes goals for increasing agriculture within the city limits. The city is allowing prospective farmers to lease up to five acres of land in Fairmount Park next to the Schuylkill Center for \$500 per half acre per year.⁸⁷ The land is designated for chemical-free production. At the same time, the Pennsylvania Horticultural Society’s pilot Growers Alliance program has partnered with Weavers Way to experiment with a system to collect and bring to market chemical-free produce from small planter beds distributed on properties throughout the city. In 2010, 15 participants grew more than 9,000 pounds of food, sold to neighbors or to the co-op grocery.⁸⁸ And groups like Urban Tree Connection (UTC) are

transforming vacant lots into vegetable farms. UTC applied the Pennsylvania Abandoned and Blighted Property Conservatorship Act to acquire two-thirds of an acre of abandoned land in West Philadelphia and establish what it has named the Neighborhood Food Central Production Farm.⁸⁹

Urban agriculture is also happening in Pittsburgh. For example, Braddock Farms is growing organic food on abandoned lots in the borough of Braddock, near a steel mill.⁹⁰ (See photo above.)

Some state governments have considered steps or taken action to promote urban agriculture. In Pennsylvania, the legislature is considering a bill to allow local governments to establish land banks, which would catalog areas where groups like UTC could establish farms, and facilitate farm occupancy – or take other actions to reduce blight.⁹¹ New York State passed legislation establishing an Office of Community Gardens within the state

Department of Agriculture and Markets. The office helps community groups identify suitable land, coordinates between groups and state and local agencies to facilitate farming on that land, helps community gardening programs network with each other statewide, and otherwise promotes community gardening.⁹²

States that guide or constrain local governments' comprehensive planning or zoning rules can amend those laws to facilitate or encourage urban agriculture. State laws, like New York's, can also officially recognize gardens as a permissible public use of state or local land. Laws can also authorize private landowners to use their yards for food production, such as the Right to Grow bill considered in 2010 by the Georgia Legislature, which would have protected property owners' ability to produce food for non-commercial purposes.⁹³

On their own, local governments can also take action to encourage or support urban agriculture. For example:

- Detroit – a city that has experienced dramatic population reduction since the 1950s – has developed a variety of tools to encourage residents to grow food.⁹⁴ The city has established an “Adopt-a-Lot” program, where any resident, free of charge, can landscape or garden a vacant property. The only stipulation is that the resident must be prepared to give up the property should the city decide to sell it. Wayne County and the State of Michigan also own land in Detroit, and they offer land for sale, for lease, or for informal use as a garden with a minimal fee.⁹⁵

The Detroit Planning Department has also been working on an official set of codes and standards to guide the development of urban agriculture. The policy is designed to facilitate and govern facilities and

activities including urban gardens, urban farms, vertical farming, farmers markets, farm stands, greenhouses and hoop-housed food plots, aquaculture, composting, and raising farm animals.⁹⁶ (The program could be improved by helping to identify and clean up land contamination problems, which can be an issue in areas formerly used for industrial activity.)

- Portland, Oregon, and Milwaukee, Wisconsin, have zoned areas where different types of agricultural activities are permitted, conditionally allowed, or restricted.⁹⁷
- Seattle's 2005 comprehensive plan requires a minimum of one community garden for every 2,500 house-

Photo: Earthworks Urban Farm, Detroit



Detroit city policy explicitly supports urban agriculture, allowing residents to “adopt” vacant lots free of charge and use them to grow food. The city is home to hundreds of urban farms, some as large as four acres.

holds.⁹⁸ Seattle's mayor declared 2010 the "year of urban agriculture" and signed reforms allowing anyone to grow and sell food, and increased the limit on backyard chickens to eight from three.⁹⁹

- Cleveland and Boston have developed permissive zoning rules for urban agriculture, allowing produce cultivation within urban boundaries.¹⁰⁰
- Baltimore has an Office of Sustainability that includes facilitating urban farming within its mission, including advocating for zoning changes.¹⁰¹
- In February 2011, the city of San

Francisco adopted a resolution approving a new planning code that would support the development of a diverse range of urban gardens and farms.¹⁰² And in July 2010, Mayor Newsom ordered all city departments to identify land under its control that could serve as farmland, and to buy local or sustainable foods to the maximum extent possible, on top of 10 other sustainable food directives.¹⁰³

In some cases, restrictive zoning codes will have to be revised to enable new types of urban food production. For example, in 2009, food activists in Sacramento, CA overturned a 60-year-old ban on front-yard food gardens.¹⁰⁴ In Philadelphia, a group of urban agriculture visionaries called "Philadelphia Rooftop Farm" see rooftop space as potential organic farm fields, but face zoning and building code obstacles, in addition to restrictive rooftop access policies.¹⁰⁵ Updating these policies to facilitate urban agriculture – while also ensuring that the codes do their job to maintain building safety – can increase the capacity of communities to grow food locally.



Major retail chains and conventional food supply companies have highly developed and often vertically integrated supply chains. Sustainable food systems need their own distribution systems in order to effectively compete.

Providing New Markets for Sustainably Grown Food

Farmers who seek to market their sustainably produced food – and consumers seeking to buy that food – need to have ways to connect with one another. Farmers markets and community-supported agriculture relationships are important ways to make those connections, but are often time- and resource-intensive for both growers and consumers. In order for sustainable food production to truly reach its transformative potential, new channels will need to be created for farmers to reach consumers, and to do so in

ways that are efficient in terms of time and energy.

Major retail chains and conventional food supply companies have highly developed and often vertically integrated supply chains that purchase farm products in large volumes, ship them to processing centers and then on to major retail centers or wholesale delivery businesses, and finally distribute them to restaurants or other food retail businesses. These systems are typically well-organized and convenient.

Pennsylvania and other states have already taken the first steps toward creating sustainable food systems that link farmers with institutions and individuals that wish to buy their products. Many states have also used government's power as a major purchaser of food to support local farmers.

Creating Local Food Distribution Networks

In order to compete effectively with conventional food distribution systems at scale, local food distribution networks are needed to provide convenient “one-stop-shopping” for seasonal produce.

“Food hubs” provide a critical link between farmers, processors, and consumers of local farm products. Food hubs allow for the coordination of “agricultural production and the aggregation, storage, processing, distribution, and marketing of locally or regionally produced food products,” according to the Regional Food Hub Advisory Council in California.¹⁰⁶ A food hub should provide covered space, loading docks, and cold storage capabilities.¹⁰⁷

To get local food distribution networks up to speed, governments can offer technical, financial or zoning support. Policy support can make it easier and cheaper for local businesses to obtain seasonal local



Philadelphia's Common Market, pictured here, is a wholesale distributor of local food to buyers including area hospitals, schools, and the city transit agency. State funding helped to launch the business.

produce, and enable local food producers to reach a wider market.

Pennsylvania has provided important financial support for the creation of one local “food hub”: Philadelphia’s Common Market. Located in the Hunting Park section of Philadelphia, the market connects local farmers with more than 100 wholesale buyers, including area hospitals, schools, and the city transit agency.¹⁰⁸ The market was launched with the support of private funders, in addition to funding from Pennsylvania’s Department of Community and Economic Development First Industries Agriculture Grant Program and Community Service Block Grant Program.¹⁰⁹

Other states have also provided critical funding or support for the development of food hubs:

- In 2011, Vermont’s Farm to Plate Initiative awarded \$40,000 in grants for the state’s local food distribution infrastructure, including the Mad River Valley Food Hub, the Intervale

Food Hub, and the Food Venture Center.¹¹⁰ The Vermont General Assembly made the funding available as part of its 2010 Jobs Bill.

- In 2009, New York State provided support for the acquisition of space for a wholesale farmers market at the Fulton Fish Market in the Bronx. The state Department of Agriculture awarded a \$296,000 grant to the Council on the Environment of New York City, a local non-profit organization that manages more than 40 smaller, retail farmers markets in the New York City metropolitan area, to manage, promote and expand what would now be called the New York Wholesale Greenmarket.¹¹¹ The Wholesale Greenmarket is the only central place in New York City where local produce can be bought in larger quantities, and its new home fills the gap left when two prior locations were lost to development.¹¹²

- The Buy Local, Buy Wisconsin program has given tens of thousands of dollars in grant funding to projects related to food hub development.

In 2008, the program funded the Producers & Buyers Co-op to launch a local distribution business for institutional buyers. In 2010, the program funded Green and Green Distributing to open and operate a centralized local and organic food distribution hub in Madison.¹¹³

- In 2009, the Hawaii Legislature proposed legislation that would provide funding for the development of a business plan for an organic food hub.¹¹⁴ The Hawaii bill shows the potential for states to act as catalysts in the establishment of food hubs, as well as funders of food hub proposals.

Using Government's Purchasing Power

Government agencies – local, state and federal – are major purchasers of food, both directly through the purchase of food for schools, hospitals, prisons and other institutions and indirectly through support of food assistance programs. Efforts to use the government's purchasing power to support sustainable food production can create vast new markets for farmers – encouraging more farmers to transition to sustainable production techniques.

Farm-to-School Policies

Farm-to-school policies boost local food production and consumption by facilitating linkages between schools and local farms, allowing schools to purchase local and healthy food.

By May 2011, more than 2,300 farm-to-school programs had connected local farmers with nearly 10,000 schools in 48



Photo: USDA

A food hub should provide covered space, loading docks, and cold storage capabilities. For example, the freezer pictured here at the Fall Line Farms Food Hub stores meat produced by Dragonfly Farm in Virginia, before delivery to consumers that order the meat through Lulu's Local Food website.

states.¹¹⁵ Thirty-three states – including Pennsylvania – have passed laws that create or support farm-to-school programs, up from 18 in 2008.¹¹⁶

Farm-to-school programs increase sales for local farmers. For example, the New York City School District signed a three-year contract with upstate apple farmers worth \$4.2 million.¹¹⁷ And the 60 farms participating in Massachusetts' farm-to-school program generate more than \$700,000 in additional revenue every year – that's almost \$12,000 for every farmer participating in the program. For these farmers, sales to schools make up 5 to 10 percent of their total sales and offer some financial security.¹¹⁸

Farm-to-school policies can work in at least two ways. First, a farm-to-school policy can establish methods to educate and connect farmers and schools. For example, Virginia's farm-to-school website allows schools to easily locate farms and produce in their area by listing farms by county, fruit, vegetable, and meat, and by posting the farm's address and contact information. The website also posts a list of schools by county participating in the farm-to-school program, so they can be located by farms wanting to sell locally. The statewide farm-to-school coordinator makes it easy for food service providers to buy local, since it is beyond their historic experience.

Second, a farm-to-school policy can remove barriers preventing schools from working with farms, including price barriers, administrative barriers and practical barriers.

- *The price barrier:* School districts that want to buy sustainable or local food are often blocked by regulation that forces them to purchase food from the supplier offering the lowest price, even if the food is unhealthy and imported from outside the state. Procurement policies that allow for

geographic and health preferences allow school districts to purchase food from local, sustainable, or organic farmers even if the price is higher. Strong preference laws, such as those in Colorado, allow school districts to purchase food from preferred suppliers at any cost within their available food budget. Weak preference laws only allow schools to purchase food from preferred suppliers if their price is a small fraction above the lowest bid. Maryland, for example, passed legislation in 2006 that allows state schools and facilities to purchase food from local suppliers if their food is no more than 5 percent higher than the lowest bid.¹¹⁹

- *The administrative barrier:* School districts are often required to purchase food from farms that have achieved Good Agricultural Practices (GAP) certification. This certification is a federal program intended to reduce the chances of bacterial contamination of fruits and vegetables. The problem is that the certification process can be complicated and expensive, especially for small- to mid-sized farmers growing multiple crops.¹²⁰ Institutional buyers can also have other requirements or expectations for farmers, ranging from insurance policies to food processing specifications. Farm-to-school programs can reduce these barriers and increase the number of participating farms by providing educational, technical and financial assistance to help farmers become eligible to do business with school districts.
- *The practical barrier:* School food service programs may not be trained to deal with food products coming directly from a farm, or be familiar with the concept of planning a seasonal menu. Further, some

schools have no kitchens, since they only heat prepared food. Farm-to-school programs can provide education and technical assistance to schools to ensure a smooth and effective transition to using fresh, local ingredients in meals.

In 2006, the Pennsylvania legislature created the Healthy Farms and Healthy Schools program, which is a limited form of a farm-to-school policy. The program provides grant funding to schools to include agricultural education in kindergarten and provide local food for kindergarteners.

However, the program is limited in important ways. It is only open to kindergarten; the grants are capped at a maximum of \$15,000 per school, with the school responsible for matching 25 percent of the grant with its own funding or in-kind expenditure; and grant funding is dependent on annual appropriation from the legislature, which is not guaranteed. The Pennsylvania legislature did not authorize funding for the program for the 2011-2012 school year, effectively halting the program.¹²¹

Other states have established model farm-to-school programs:

- Washington State has one of America's most successful farm-to-school programs. Created by the state legislature in 2008 via the Local Farms-Healthy Kids Act, the program works with the state Department of Agriculture, the Superintendent of Public Instruction, Washington State University and local partners.¹²²

The legislation removed barriers preventing farmers from doing business with schools, allowing a price premium for local food and offering technical assistance to

farmers for the required certifications. It also established a staff dedicated to farm-to-school activities. For example, program staff hold networking workshops for school district nutrition directors and local farmers. At the workshops, nutrition directors are given overviews on the advantages of buying locally, and then they immediately meet with farmers to network and discuss. Many schools then choose to start purchasing locally, often using connections developed at the workshop.¹²³

To date, the program has connected approximately 90 participating school districts and 60 participating farms.¹²⁴

Farm-to-Cafeteria Programs

Governments can increase marketing opportunities for farmers and strengthen local farm economies using farm-to-cafeteria policies. These policies encourage or require public institutions, including government agencies, prisons, universities, or other large purchasers of food to work with local and/or sustainable farms to buy fresh produce.

Like farm-to-school policies, the best farm-to-cafeteria programs eliminate barriers preventing institutions from doing business with local farmers (such as allowing for price differences, offering assistance with administrative hurdles, or providing education on seasonal menus and fresh food preparation). The best programs also have requirements rather than goals, and have adequate and stable funding.

While Pennsylvania has no statewide legislation authorizing farm-to-cafeteria programs, several organizations are working to create these connections without explicit support from governments, including The Food Trust, Fair

Food, and Common Market in Philadelphia.¹²⁵

Several states and localities have launched strong farm-to-cafeteria policy efforts:

- In 2009, the Illinois legislature adopted the Local Food, Farms and Jobs Act, setting goals for state agencies to acquire 20 percent of their food from local sources by 2020.¹²⁶ Additionally, the policy requires the state to support and encourage entities receiving state dollars – including child care centers and hospitals that spend more than \$25,000 on food per year – to source at least 10 percent of their food from local sources over the same time span. The law directed state agencies and state-funded facilities to begin tracking local food purchases in fiscal year 2011 and report progress on an annual basis.¹²⁷

To facilitate this, the law allowed state agencies to purchase local food items even if they cost up to 10 percent more than comparable items obtained from further away. The law also established a Local Food, Farms and Jobs Council to assist state agencies in meeting the goals through a variety of activities, including establishing a certification and labeling program to distinguish food products made completely within Illinois from imported ones. (For further discussion of this entity and its responsibilities, see page 42.)

The state estimates that the law will bring a \$30 billion boost to the local economy by keeping more food dollars in-state, where they can create jobs and opportunities for farmers.¹²⁸

- Woodbury County in Iowa has pioneered a policy that increases demand for organic food that comes



Elementary schools in Pawtucket, Rhode Island, serve meals made with many local ingredients, including honey from bees kept by Aquidneck Island Apiaries, which brought a sample hive to school in March 2011. Farm-to-school policies facilitate connections between schools and local farms, providing a vehicle to support sustainable food production techniques.

from local sources. The county requires all county departments that serve food to purchase from organic and local farmers first, and local non-organic farmers second, as part of an incentive package for local farmers to convert to organic production.¹²⁹

The policy defines local as anything grown and processed within a 100-mile radius of the county courthouse, and defines organic according to USDA standards, although it allows farms undergoing the conversion process to be considered organic for the purposes of the county. The policy names a farm cooperative to handle food purchasing decisions for the county to ensure that it is getting a fair deal. The policy allows for an increase in food costs, as long as that increase does not exceed the estimated economic benefits to the county of keeping more food dollars circulating amongst local businesses.¹³⁰

Farm-to-Food Bank Policies

Farm-to-food bank policies create linkages between food banks and local farms, allowing food banks to purchase local, healthy food. These programs work much like other farm-to-institution policies, providing a new wholesale food sales option for local farmers. For example:

- Kentucky awards grants to non-profit organizations to buy and distribute Kentucky-grown surplus produce and deliver it to food banks and other charitable food service outlets.¹³¹
- Washington adopted a farm-to-food bank pilot program in 2008.¹³² The program received proposals from 14 different charitable food institutions, but was unable to fund all of them. The legislature appropriated \$350,000 for the program in 2009, but appropriated no further funds and allowed the program to lapse.¹³³ While it was active, the program purchased more than 530,000 pounds of fruit, vegetables, dairy, eggs and meat from Washington farmers, which was then distributed through more than 80 food banks to nearly 300,000 households.¹³⁴

Incorporating Local Food into Food Assistance Programs

Food assistance programs represent a huge government investment in the food system. By directing this money into local farmers markets and other retail outlets for fresh, sustainable food, governments can promote a more vibrant agriculture industry while simultaneously improving citizens' access to nutritious food.

Across the country, states and cities have been creating programs that enable and encourage low-income and at-risk populations to get their food from local sources. As these populations use the programs to purchase and obtain food from sustainable farms, they increase

these farms' revenue, spurring the local economy as a whole.

Extending the Reach of Nutrition Assistance

Government agencies and non-profit organizations have set up programs to direct food assistance dollars to farmers markets. These programs increase local farmer income by directing customers who might not otherwise consider shopping at a farmers market to change their buying patterns, while simultaneously increasing their buying power and directing more dollars to farmers.

The Farmers Market Nutrition Program (FMNP) is a federal program that gives coupons to at-risk populations to purchase healthy food from local farmers. Most of the coupons are funded through Congress, but states are increasingly providing supplementary funds. For example, in the 2010-2011 fiscal year, Pennsylvania appropriated \$1.2 million to supplement more than \$5 million in federal dollars. Typically, recipients spend more than 95 percent of the coupons issued, directly boosting the bottom lines of farmers selling at farmers markets.¹³⁵

FMNP coupons have helped farmers markets grow and expand. Not only do farmers receive the value of the FMNP coupons, but they also benefit from the coupon-users' additional shopping once at the market. According to Lisa Damon, who oversees the FMNP coupons at Massachusetts' Department of Agricultural Resources, the program has helped keep alive some farmers markets in low-income neighborhoods.¹³⁶ FMNP coupons are one of the reasons the number of farmers markets in Massachusetts grew by more than 250 percent over the past decade.¹³⁷

In addition, some cities and non-profit organizations provide bonus coupons that can be used to defray the often-higher costs of fresh, locally grown food. In

Pennsylvania, the Philly Food Bucks program, created by local non-profit The Food Trust and the Philadelphia Department of Public Health (with funding from the federal Communities Putting Prevention to Work initiative), gives nutrition assistance recipients at participating farmers markets \$2 in Philly Food Bucks for every \$5 in benefits spent. The Bucks can then be redeemed for food at any of 32 farmers markets in the city.¹³⁸ The Philly Food Bucks program also gives out coupons for free, in places like low-income nutrition classes, to induce additional traffic at farmers markets.

After the introduction of the Food Bucks program, nutrition assistance sales at The Food Trust farmers markets more than doubled from 2009 to 2010, with an even greater increase anticipated in 2011.¹³⁹ However, the federal funding for the program was set to expire in March 2012, forcing Philadelphia to find other sources of funds to continue the program.¹⁴⁰

Programs similar to the Philly Food Bucks initiative have increasingly been springing up in other cities nationwide. In Boston, for example, the Boston Bounty Bucks program reimburses 50 percent of nutritional assistance purchases at farmers markets, up to \$20 per recipient.¹⁴¹ This program helped increase nutrition assistance sales at Boston farmers markets from \$1,000 in 2008 to \$20,000 in 2009.¹⁴²

Equipping Farmers Markets with Electronic Benefits Transfer Technology

Pennsylvania, and many other states, have increased the reach of nutritional assistance programs by equipping farmers markets with the technology needed to accept nutrition assistance payments – electronic benefits transfer (EBT) card readers.

EBT cards work much like debit cards, but specifically for nutritional assistance

dollars. To accept payment from one of these cards, a retailer needs an “EBT terminal,” which functions much like a handheld wireless credit or debit card payment system.

Federal and state efforts have helped increase access to EBT terminals in farmers markets. The Food Trust acquired EBT terminals for its farmers markets in the Philadelphia region in 2006, with funding from a mix of state, federal and private grants.¹⁴³ The federal government gave Farm to City and the Reading Terminal Market in Philadelphia a grant to purchase EBT terminals for use at all farmers markets managed by Farm to City during the 2011 season.¹⁴⁴ Additionally, the Pennsylvania Department of Agriculture distributed 145 EBT terminals to eligible farmers markets or farmers who operate farm stands beginning in 2011.¹⁴⁵

Developing New Retail Markets

Consumers can gain access to sustainably grown food in a number of ways – through community-supported agriculture, farmers markets, farm stands, fixed retail outlets, and by patronizing restaurants that procure food from local farmers. State governments in Pennsylvania and elsewhere have developed policies designed to encourage the development of new retail outlets for fresh, local, or sustainably grown food.

Farmers Markets

Farmers markets are a primary retail outlet for many sustainable farmers. Increasing the number, convenience and visibility of farmers markets can draw both more farmers to sell produce, and more customers to buy it.

For example, in 2006 the Pennsylvania Legislature adopted the Farmers Market Development Act, authorizing grants to develop or expand farmers markets,



Farmers markets, such as this one in Leesport, are a primary retail outlet for many sustainable farmers. Increasing the number, convenience and visibility of farmers markets can draw both more farmers to sell sustainable produce, and more customers to buy it.

increasing farmers' ability to sell directly to local customers. The legislation authorized the state Department of Agriculture to award grants of up to \$10,000 to farmers, non-profits, or businesses for the purpose of developing or expanding farmers markets anywhere in Pennsylvania. The law instructs the department to consider the potential of the market to increase the purchase of locally-grown produce, to revitalize a community, and to reach underserved areas when awarding grants.¹⁴⁶

Other similar actions to develop or expand farmers markets include:

- In 2007, the Arkansas legislature appropriated \$750,000 to build and expand farmers markets across the state.¹⁴⁷
- In 2009, Minnesota adopted a bill instructing the commissioner of agriculture to promote local farmers markets and community supported agriculture businesses in order to expand the use of sustainable farming methods.¹⁴⁸ The bill also allocated

\$100,000 to identify and promote locally-grown food in grocery stores and other retail food outlets.¹⁴⁹

- Many cities offer favorable terms for farmers markets, allowing them to operate in central locations, closing streets, waiving parking rules, or otherwise facilitating the presence of a market in places where both customers and local businesses will benefit.

Restaurants

States can offer incentives to private institutions to encourage the purchase of local or sustainably-grown food items. Examples of policies that achieve this aim include:

- Connecticut certifies restaurants that serve more than 20 percent local food as "Connecticut Farm Fresh Restaurants" to assist with promotion and marketing.¹⁵⁰
- A 2011 bill in the New York Legislature would offer restaurants located

in the state \$100 in tax credits for every \$1,000 in produce purchased from New York farms.¹⁵¹

- In 2009, Missouri considered legislation that would offer a tax credit to grocery stores that purchase food products grown in-state.¹⁵²
- Also in 2009, West Virginia considered a bill that would offer an income tax credit for the purchase or sale of food grown in-state to a variety of institutions, including markets, grocery stores, and restaurants.¹⁵³
- In 2008, Rhode Island considered legislation that would offer a tax credit of up to \$1,000 to restaurants that purchase Rhode Island-grown farm products.

Fixed Retail Outlets

Often, low-income neighborhoods do not have the same access to fresh, healthy food options that can be found in wealthier areas. In these areas, grocery stores can be few and far-between. Easily accessible produce options are often limited to corner stores or bodegas that might carry some fruit along with processed snack food shipped from distant factories.

Pennsylvania has pioneered an innovative approach to address this problem by encouraging fresh food markets to open in underserved neighborhoods. Not only does the strategy increase citizens' access to healthy produce – it can provide increased retail income to local farmers and help to expand the local economy. This approach holds potential to do more to drive sustainable farming methods.

In 2001, the non-profit organization The Food Trust identified the lack of supermarkets in many Philadelphia neighborhoods and highlighted the negative effects that lack of fresh food options

was having on residents' health.¹⁵⁴ The city council charged the organization to convene community leaders and to propose a solution.

The Food Trust and its partners discovered that underserved neighborhoods have little or no access to local, organic fresh food. One of the major hurdles preventing food retailers from opening in underserved neighborhoods was the availability of financing with favorable terms. To address the problem, The Food Trust proposed to establish a program capable of providing appropriate financing.¹⁵⁵

The state legislature created the Fresh Food Financing Initiative in response. Legislators appropriated \$30 million over three years and hired a contractor to manage the funds. With this seed money, the program attracted \$165 million in additional private investment.¹⁵⁶

The program offers grants of up to \$250,000 and loans of up to \$2.5 million to businesses in exchange for siting farmers markets, community supported agriculture businesses or healthy food stores in targeted areas. The funding can be used for any stage of a project, from land acquisition and building design to store opening.¹⁵⁷

The program has successfully facilitated the construction of more than 75 farmers markets, community-supported-agriculture businesses and grocery stores in underserved neighborhoods in Philadelphia, Pittsburgh and in rural areas. More than 400,000 people have gained increased access to healthy and fresh food from more than 1.6 million square feet of new food retail space. The program created more than 4,700 new jobs and created a variety of local economic benefits, in addition to providing new markets for farmers to sell produce.¹⁵⁸

Other states, including Illinois, Louisiana, New York – and the federal government – are applying the Fresh Food

Financing model to improve food infrastructure in communities across the country.¹⁵⁹

This type of policy model could deliver more benefits for local and sustainable agriculture by increasing its focus on environmental performance, in addition to access to healthy food – such as including requirements for retailers to source produce from local farmers or apply environmental performance criteria as a condition for financing assistance.

Providing a Platform for Continued Advances in Sustainable Farm and Food Policy

Policy efforts to advance sustainable agriculture work best when they are part of a comprehensive plan. Expanding sustainable agriculture requires the participation and cooperation of thousands of farmers, businesses, governments and individuals. To be effective, these activities also require sound information to identify obstacles and the ideas of creative community leaders to solve them, as well as stable sources of funding.

Giving advocates for a sustainable food system a voice in state or local government planning is a key step to advance sustainable agriculture, as is creating dedicated sources of funding to support these efforts.

Models include everything from informal food policy councils made up of grassroots leaders, to government-sponsored planning efforts that coordinate the efforts of everyone from local advocates to the top ranks the departments of agriculture and environmental protection.

Creating food policy councils or sustainable agriculture offices are a means to a better food system, rather than an end in and of themselves. These institu-

tions have the advantage of being able to set agendas, command a bully pulpit, and hold decision-makers accountable.

Food Policy Councils

Food policy councils originated as grassroots-level efforts to bring together stakeholders in a local food economy to discuss ideas for improvement. These policy councils are typically composed of a broad spectrum of leaders from the agriculture, food security, public health, environment, and economic development spheres.

The idea has caught on with governments at the state and local levels as well, many of which have assembled official food policy councils, and charged them to identify specific steps policy-makers can take to establish or expand sustainable food systems. Because these councils incorporate a diverse group of perspectives, they can effectively point out areas where improved coordination or better policy can improve local food networks.

Pittsburgh has a grassroots food policy council, and the Delaware Valley Regional Planning Commission (DVRPC) hosts the Greater Philadelphia Food System Stakeholder Committee. Communities across Pennsylvania could benefit from having an official voice in food system issues through councils established by or supported through local or state government action.

The United States hosts more than 100 grassroots and officially authorized food policy councils as of May 2011.¹⁶⁰ State governments that have authorized food policy councils include:¹⁶¹

- Connecticut (1997),
- Illinois (2005),
- Iowa (2000),
- Maine (2005),

- Michigan (2005),
- New Mexico (2003),
- New York (2007),
- North Carolina (2001), and
- Oklahoma (2001).

At least another 19 food policy councils were specifically authorized by the action of a local government.¹⁶² The remainder are grassroots affairs.

Many of these official councils have produced reports that have guided their respective state legislatures to take action. Illinois' Farms, Food and Jobs Act, for example, followed from the work of a food policy council.¹⁶³

Government Offices Dedicated to Sustainable Agriculture

Vermont's Farm to Plate Initiative

Vermont's Farm to Plate Initiative stands out as a prime example of how government can create and sponsor an official planning effort to steer and coordinate a wide range of activities designed to advance sustainable agriculture and the local economy.

In 2009, legislators charged the Vermont Sustainable Jobs Fund, the Sustainable Agriculture Council and other stakeholders to research and develop a 10-year strategic plan for the state's food system. The plan, completed in January 2011, envisions Vermonters doubling their consumption of locally produced food in the next decade, with purchases rising to \$200 million per year.¹⁶⁴ Economists predict that every 5 percent increase in local food purchases will create 1,500 new jobs in Vermont.¹⁶⁵

The plan outlines 33 goals and 60 high priority strategies, including preserving farmland and soils, minimizing

environmental impacts, reducing farm expenses, boosting consumption of local foods, and boosting on-farm renewable electricity production.¹⁶⁶

The plan is already leading to action. The state Agency of Agriculture, Food and Markets created and filled a new "Local Foods Administrator" position in response to needs identified in the original strategic plan, with funding provided by the state legislature through its 2011 Jobs Bill.¹⁶⁷ State departments have facilitated the launch of new businesses like the Mad River Food Hub, a 3,200 square foot shared meat and vegetable processing, storage and distribution facility in the Mad River Valley. Overall, the state has deployed several million dollars in grants targeted to improve aspects of the state's food system according to the Farm to Plate strategic plan.¹⁶⁸



To facilitate collaboration in building a sustainable food system, Vermont established a "Farm to Plate Network," bringing together government, educational and community leaders. At the first meeting of the network, pictured here, members discussed how to reach Vermont's goal of doubling local food consumption by the end of the decade.

Recognizing that further progress will require new kinds of cooperation, the state established a “Farm to Plate Network” to facilitate collaborations between various state agencies and departments. The network brings together the efforts of more than 150 stakeholders, from the Vermont Secretary of Agriculture, Chuck Ross, to Ela Chapin, director of the Farm Viability Program at the Vermont Housing and Conservation Board, to Ben Waterman of the Center for Sustainable Agriculture, to local educators, farmers and food business owners.¹⁶⁹

At the first meeting of the Farm to Plate Network in October 2011, Ellen Kahler, the executive director of the Vermont Sustainable Jobs Fund, told local media about her view on the potential of the state’s approach to growing local and sustainable agriculture. “The sky’s the limit, really,” she said. “The market is there, the opportunity is there, people are really pumped and excited about moving this all forward.”¹⁷⁰

Moreover, Vermont officials planned to make presentations to food system leaders in Maine, Connecticut and Rhode Island in 2012, as these states consider developing similar approaches to advancing sustainable agriculture.¹⁷¹

Illinois’ Local Food, Farms and Jobs Council

Illinois has also taken several important steps to systematically plan an expansion of sustainable agriculture.

In 2007, the Illinois General Assembly created the Illinois Local and Organic Food and Farm Task Force. Much like a food policy council, this group was charged with developing a plan to expand and support a statewide food system that would increase the role of local and organic agriculture.

The General Assembly passed many of the ideas developed by this task force into law in 2009, through the Illinois Local Food, Farms and Jobs Act. One of the most notable features of this law was the creation of a government-sponsored organization, the Local Food, Farms and Jobs Council, charged with overseeing the development of the state’s sustainable agriculture economy. The duties of this new organization include:¹⁷²

- helping state agencies purchase local farm products;
- assisting local farm and food entrepreneurs to identify and secure resources for local food projects;
- supporting the development of a local food distribution system;
- facilitating the use of public lands for growing food;
- tracking and reporting on the expansion of the Illinois local food economy; and
- developing a label and certification program to help distinguish local food products wherever they are sold.

The Local Food, Farms and Jobs Council will provide the state the tools it needs to ensure that state departments are meeting the goal of procuring at least 20 percent of their food purchases from state suppliers by 2020.

In its first year, the office identified 150 obstacles to a local food economy and began planning how to dismantle them.¹⁷³ Through the Council, the Illinois Department of Commerce and Economic Opportunity teamed up with FamilyFarmed.org to produce a guide to building successful food hubs in Illinois in early 2012.¹⁷⁴ The Council meets pub-

licly to report its progress quarterly, with updates available at foodfarmsjobs.org.

Funding Efforts to Expand Sustainable Agriculture

Ideas for how to expand sustainable agriculture tend to be in much greater supply than money to get those efforts off the ground. The strongest incentive policies are those that include built-in, dedicated revenue sources to ensure the mission of the policy will be accomplished.

Programs that rely on appropriations from the state legislature every year are constantly at risk of budget cuts, and thus are often short-lived or never get off the ground at all. Pennsylvania's Healthy Farms and Healthy Schools program is a good example – the legislature chose not to fund any grants for the 2011-2012 school year.¹⁷⁵

Only a few programs designed to expand local and organic agriculture have dedicated funding sources. One of the most notable is the Washington D.C. farm-to-school program.

In May 2010, the Washington, D.C., city council authorized a healthy schools initiative, including farm-to-school activ-

ities. The initiative applies to all public and private schools in the district, and requires schools to provide more support for school breakfasts and lunch, to incorporate more local produce, and to offer grants for school gardens.¹⁷⁶

The city council expected the program to cost about \$6.5 million a year. Councilmember Mary Cheh argued that the program should be paid for by a soda tax, levied per ounce on beverages with high sugar content. She envisioned the policy as a source of funding, and as a tool to influence city residents toward healthier diets, countering the fact that soda prices had dropped almost 40 percent (in inflation-adjusted terms) since the late 1970s, while the price of fresh fruit and vegetables had increased by 40 percent over the same time period.¹⁷⁷

The council ended up funding the healthy schools initiative by making soda taxable under the city's 6 percent sales tax.¹⁷⁸ The tax raises more than \$7 million a year, providing adequate funding to improve access to healthy, local food at schools. The tax is large enough and consistent enough to ensure that every school in the district can benefit.

Conclusions and Recommendations

The grassroots movement for a sustainable food system has developed to the point where sustainable agriculture and a local, organic diet are becoming mainstream concepts. Entrepreneurs, non-profits, neighborhood organizations, and local governments have teamed up to create dozens of ideas to improve the state of the American food system.

Pennsylvania has been a leader in the development of innovative policies to promote sustainable food systems. But the impact of those efforts to date has been small. Moreover, with critical sources of funding being cut back or expiring – such as funding for Growing Greener and the state’s fledgling farm-to-school program – Pennsylvania risks losing momentum.

To create a new food system that protects and enhances the environment

while remaining consistent with Pennsylvanians’ core values, the Commonwealth will need to adopt the best ideas from other states, dramatically increase the scale of its current efforts, and ensure that the energy put forward in building a better food system translates into real results for the environment.

Scale Up Effective Programs

Expanding sustainable agriculture can create new economic opportunities for Pennsylvania farmers while protecting the environment, and so should be a priority for the Commonwealth, even in difficult economic times.

Pennsylvania should increase the level and consistency of funding available to sustainable food programs to amplify their effects. The state’s Path to Organic

Program is a prime example – it is currently limited to only 13 farmers, but could have a much larger reach if given adequate resources. With the information gained from this pilot transition program, Pennsylvania should set up a larger project, with a dedicated funding source, that accepts new applicants on an ongoing basis.

The state's Healthy Farms and Healthy Schools program is another excellent candidate for increased scope and funding. Access to locally- and sustainably-produced food – and to education about the importance of our food system – should be available across all grades, in all corners of the state.

Additionally, all state and local government departments should review their purchasing policies, directing food dollars toward local, organic and sustainable agriculture wherever possible.

Adopt the Best Ideas from Other States

Pennsylvania should take the best ideas from governments across the country and adopt them. In particular, Pennsylvania should adopt a set of overarching goals to guide the state's policy-making in sustainable food.

All of the policies discussed in this report could have a profound impact on the state's agricultural economy if adopted at sufficient scale and in a coordinated fashion. For example, the state should adopt broad goals for the procurement of local food at state-funded institutions to build momentum and provide a handle for accountability, like the Illinois Local Food, Farms and Jobs Act. The state should also fund innovative ideas for building a local food distribution system, such as

a network of coordinated food hubs like Philadelphia's Common Market – along the lines of Vermont's Farm to Plate Initiative.

Develop New Innovations

There is a great deal of room for Pennsylvania to take the lead in promoting sustainable agriculture.

Providing consistent and stable funding for sustainable agriculture activities, in particular, is an area ripe for innovation. Pennsylvania has already broken new ground with the Fresh Food Financing Initiative, which leveraged public money to attract private capital for increasing access to fresh food in underserved neighborhoods. Designed properly, programs like these can help reduce the environmental impacts of agriculture and increase the strength of local food systems as well. More new ideas like these are necessary.

One possibility to consider would be the establishment of a sustainable food infrastructure bank with a dedicated funding source. This institution could provide a pool of funding the state could use for a broad range of food system priorities. This infrastructure bank would make Pennsylvania's sustainable agriculture efforts less vulnerable to the uncertainty of the annual appropriations process and inevitable budget cuts.

Finally, many farmers lease their land. Leases are often renegotiated annually, promoting short-term planning in farm management. Pennsylvania could promote sustainability through a set of guidelines to encourage landowners to adopt longer-term leases that incorporate soil health or carbon sequestration targets as conditions.

Increase the Focus on Sustainability

Expanding local and organic agriculture is a critical step toward a food system that preserves and protects our natural resources and our environment for the long haul. However, greater progress toward a sustainable food system is possible.

In addition to evaluating the environmental benefits of organic production – as the state is doing through the Path to Organic program – Pennsylvania should lead the way in the development and implementation of environmental sustainability standards for agricultural products. The Food Alliance, for example, is one of many providers of third-party certification of agricultural products. Its criteria for certification are much broader than those of the USDA Organic program – incorporating the protection of water and soil resources, safe working conditions, and the provision of habitat for wildlife – even as it allows limited use of chemical pesticides.¹⁷⁹ The Food Alliance also issues certifications for food processors.

Standards such as those designed by the Food Alliance show that it is possible to base consumer and institutional purchasing decisions on criteria that reflect environmental goals. Pennsylvania should increasingly target its existing policy tools toward supporting farmers, processors, and marketers whose products are not only local, but also have been demonstrated to protect the state's air, water and land. Over time, the state should transition toward making the achievement of environmental benchmarks a requirement for *all* state agricultural assistance, including access to agricultural credit.

Establish Institutions that Can Steer Policy from the Inside

Advocates for a sustainable food system can have widespread and meaningful impacts, especially if they are placed in positions of authority within official advisory bodies or government agencies empowered to expand sustainable agriculture.

First, Pennsylvania and its local governments should establish food policy councils (or offer formal support for existing grassroots councils), charge them with reporting on the state of the local sustainable agriculture economy, and implement their best policy ideas.

Second, the state should create a division within the Pennsylvania Department of Agriculture devoted to expanding a sustainable and local food system. This division should track and facilitate the achievement of broad goals for the procurement of local food to guide state action and provide a handle for accountability.

These institutions, if working effectively with the grassroots energy of the sustainable food movement, can raise food system issues on a statewide basis, identify obstacles to a sustainable food system, advocate for solutions, and demonstrate the diverse nature of the constituency for an alternative to the dominant food system. Additionally, they can identify and quantify the benefits of sustainable agriculture policies and programs and articulate a case for why they should be expanded.

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